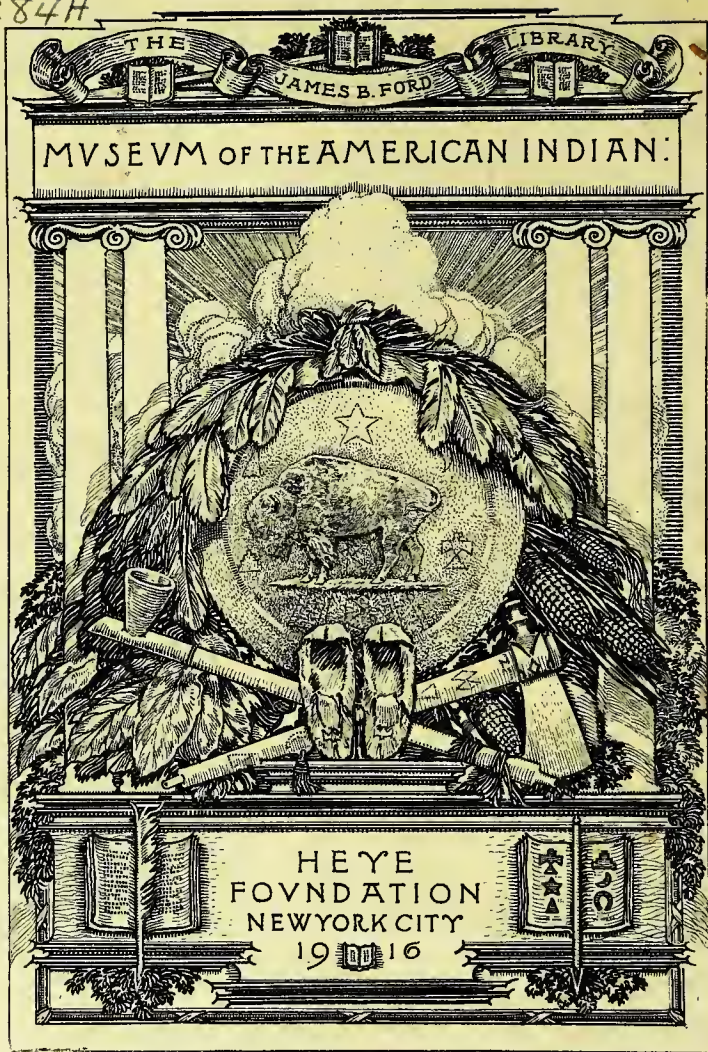


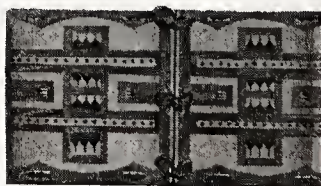
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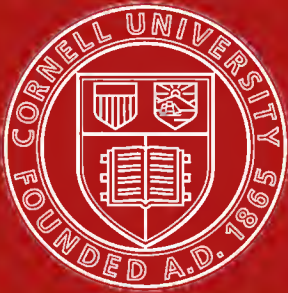


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ILLUSTRATED CATALOGUE
OF THE
COLLECTIONS OBTAINED FROM THE INDIANS
OF
NEW MEXICO AND ARIZONA
IN 1879
BY
JAMES STEVENSON

[EXTRACT FROM THE SECOND ANNUAL REPORT OF THE BUREAU OF ETHNOLOGY.]



WASHINGTON
GOVERNMENT PRINTING OFFICE
1883



SMITHSONIAN INSTITUTION—BUREAU OF ETHNOLOGY.

ILLUSTRATED CATALOGUE
OF THE
COLLECTIONS.OBTAINED FROM THE INDIANS
OF
NEW MEXICO AND ARIZONA IN 1879.
BY
JAMES STEVENSON.

NOTE.

The following catalogue of the collections made during 1879 was prepared for the First Annual Report of the Bureau of Ethnology, but owing to want of space was not included in that volume. Before the necessity of this action was made apparent the matter had been stereotyped and it was impossible to change the figure numbers, etc. This will explain the seeming irregularity in the numbering of the figures—the first one of this paper following the last one of the above-mentioned report. The second catalogue, that of the collection of 1880, also included in this volume, has been made to correspond with the first, the figure numbers following in regular order.

LETTER OF TRANSMITTAL.

WASHINGTON, *January 3, 1881.*

SIR : I have the honor to submit herewith an illustrated catalogue exhibiting in part the results of the ethnologic and archæologic explorations made under your direction in New Mexico and Arizona during the summer of 1879.

As you are already familiar with the mode of travel and the labor necessary in making such investigations and explorations, as well as the incidents common to such undertakings, and as I do not consider them of any special interest or value to the catalogue, I have omitted such details.

I beg, however, in this connection, to refer to the services of Messrs. F. H. Cushing, ethnologist of the Smithsonian Institution, and J. K. Hillers, photographic artist of the Bureau of Ethnology, both of whom accompanied me on the expedition.

Mr. Cushing's duties were performed with intelligence and zeal throughout. After the field-work of the season was completed he remained with the Indians for the purpose of studying the habits, customs, manners, political and religious organizations, and language of the people; also to explore the ancient caves of that region. His inquiries will prove of the utmost interest and importance to science. Mr. Hillers labored with equal zeal and energy. His work is of the greatest value in illustrating some of the most interesting features of our investigations. He made a large series of negatives depicting nearly every feature of the Pueblo villages and their inhabitants. The beauty and perfection of the photographs themselves fully attest the value and importance of his work.

I would extend most cordial thanks to General Sherman for the special interest he manifested in our work, and for directions given by him to the officers of the Army serving in the West to assist us in carrying out the objects of the expedition; and to the officers who so cordially rendered such aid.

To General Edward Hatch, commanding the district of New Mexico, we are indebted for valuable information and material assistance, which were liberally granted, and to which in great part our success was due. The party also received valuable aid from Gen. George P. Buell, U. S. A., who was in command at Fort Wingate during our work at Zuñi, for which I am pleased to extend thanks.

The large number and variety of objects collected by the members of the expedition, and the many difficulties incident to such undertakings, as well as the limited time devoted to the preparation of the catalogue, will account for any imperfections it may contain.

Hoping, however, that, notwithstanding these, it may serve useful ends in the continuation of such work,

I am, very respectfully, your obedient servant,

JAMES STEVENSON.

Prof. J. W. POWELL,

Director Bureau of Ethnology.

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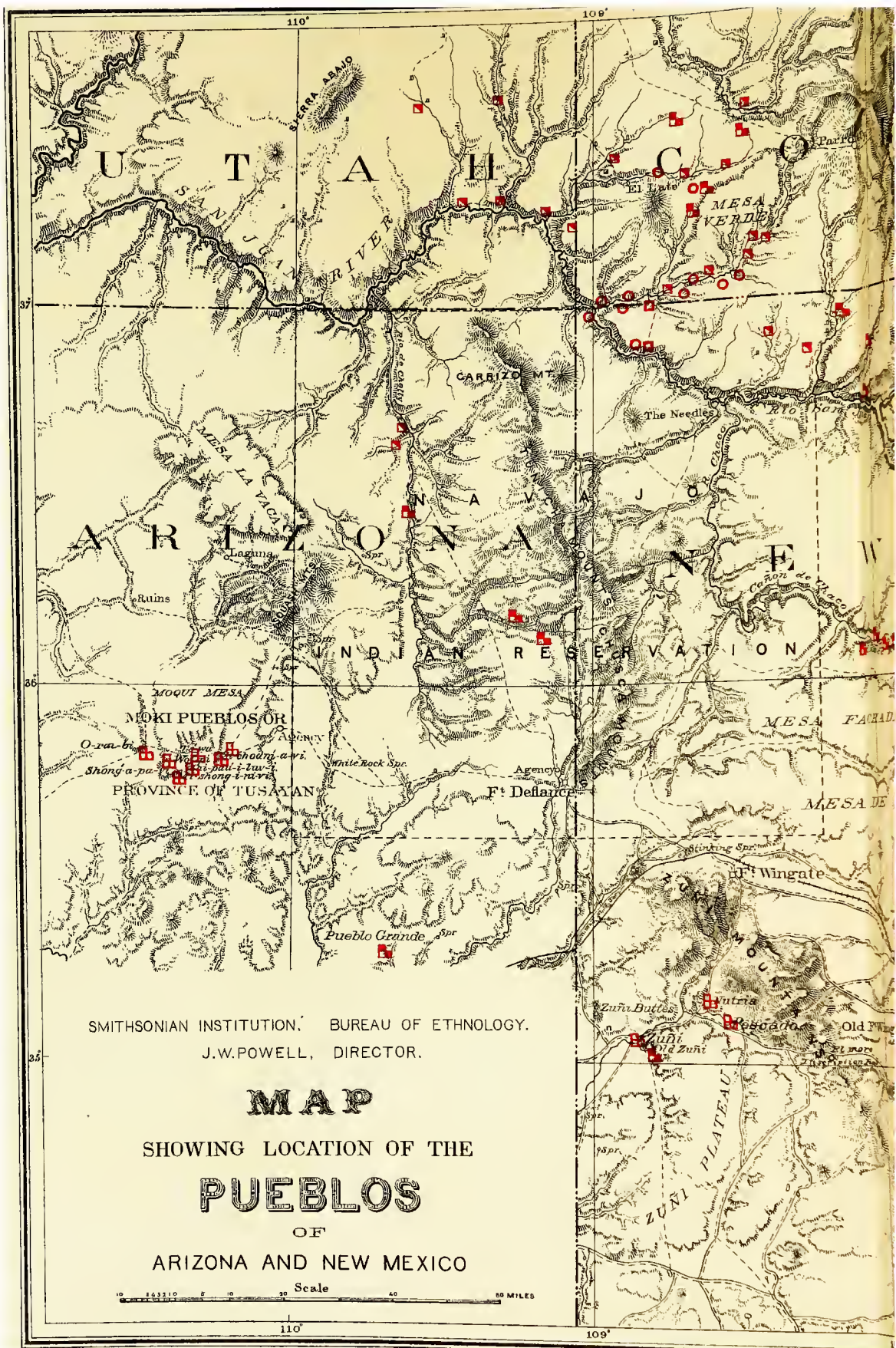
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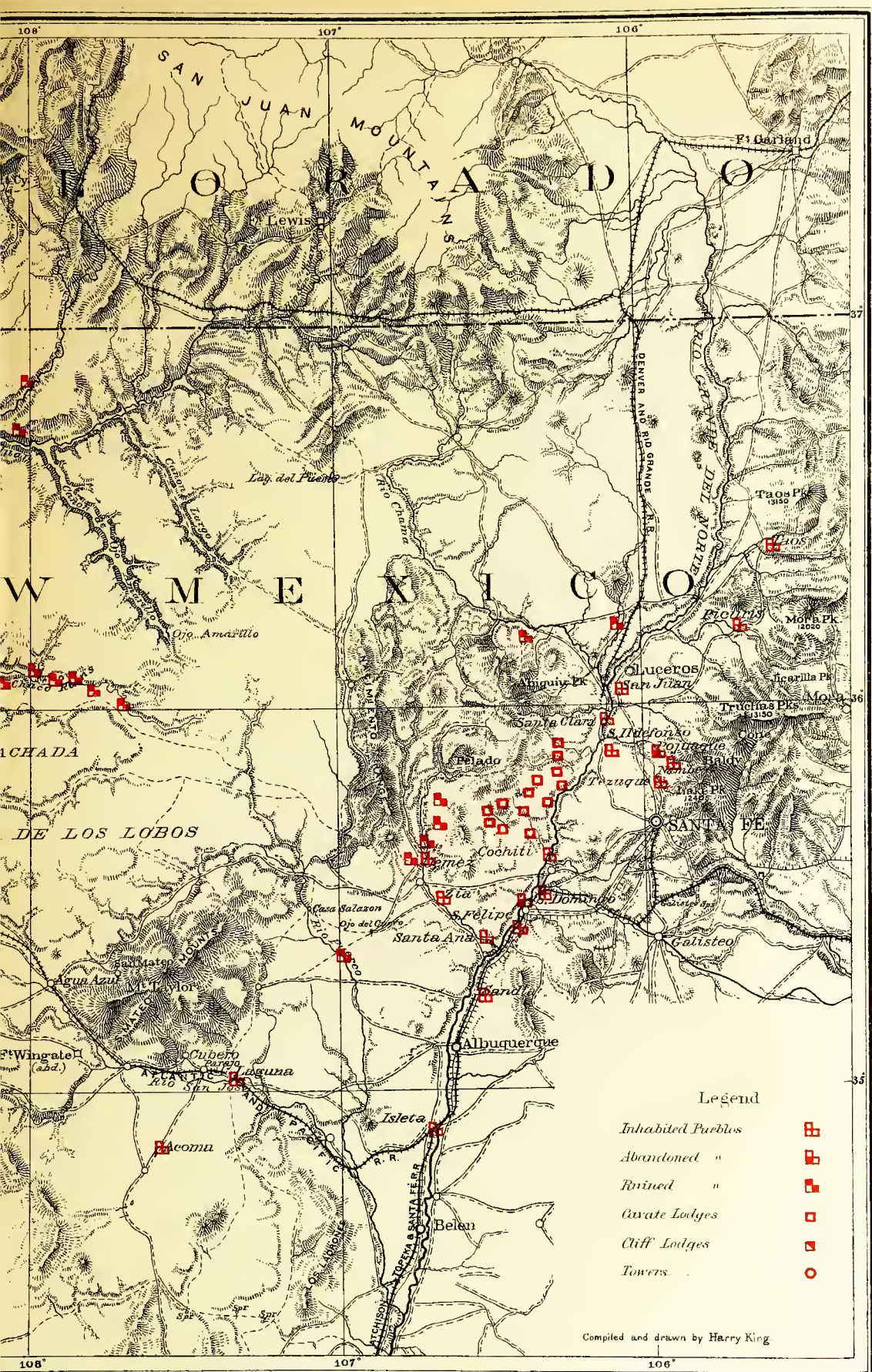
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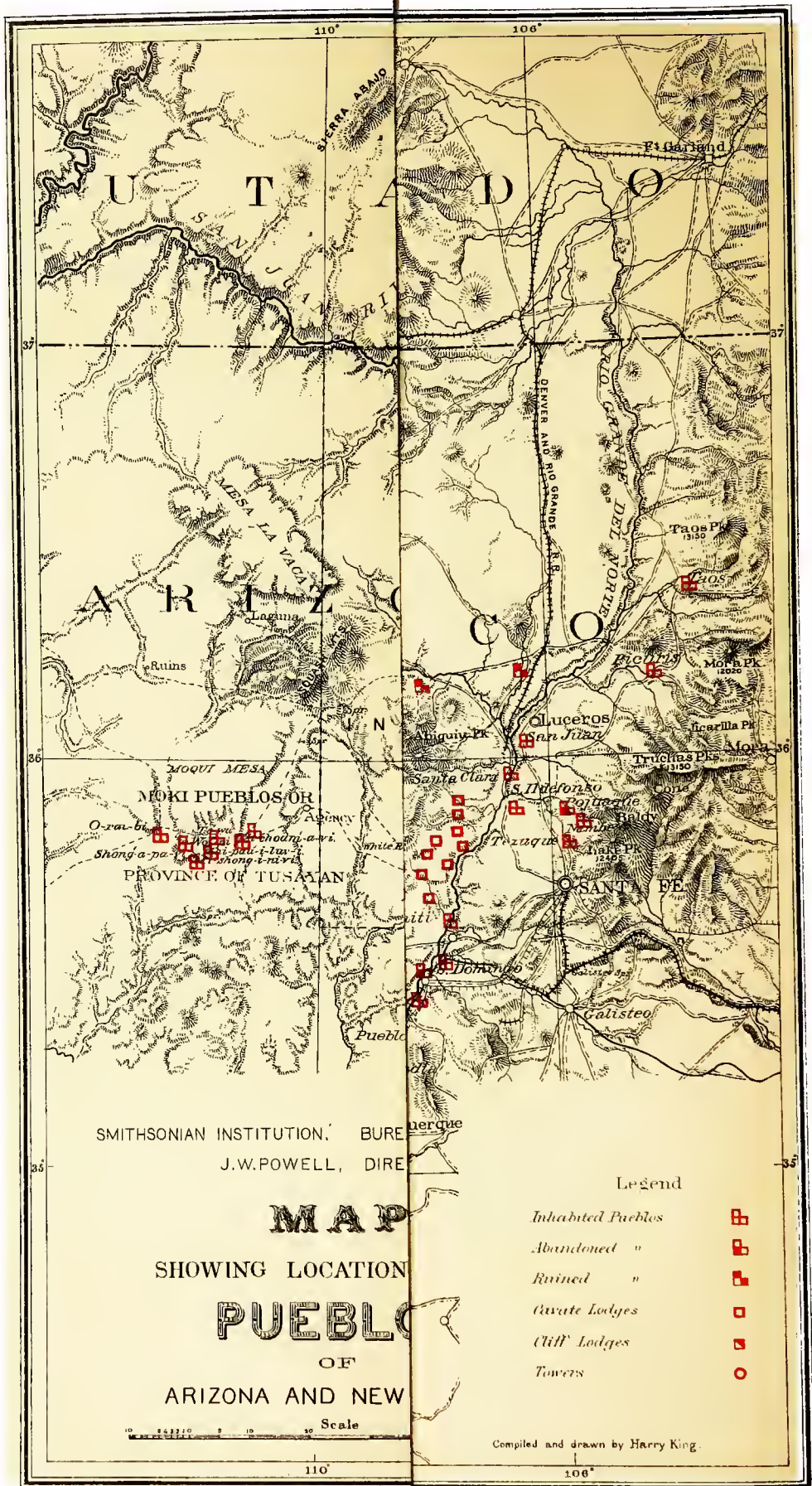


SMITHSONIAN INSTITUTION, BUREAU OF ETHNOLOGY.
J.W. POWELL, DIRECTOR.

MAP
SHOWING LOCATION OF THE
PUEBLOS
OF
ARIZONA AND NEW MEXICO

Scale 0 10 20 30 40 50 MILES





ILLUSTRATED CATALOGUE OF THE COLLECTIONS OBTAINED FROM THE INDIANS OF NEW MEXICO AND ARIZONA IN 1879.

By JAMES STEVENSON.

INTRODUCTION.

It is not my intention in the present paper—which is simply what it purports to be, a *catalogue*—to attempt any discussion of the habits, customs, or domestic life of the Indian tribes from whom the articles were obtained; nor to enter upon a general comparison of the pottery and other objects with articles of a like character of other nations or tribes. Occasionally attention may be called to striking resemblances between certain articles and those of other countries, where such comparison will aid in illustrating form or character.

The collection contains two thousand eight hundred and fifty-eight specimens. Although it consists very largely of vessels and other articles of pottery, yet it embraces almost every object necessary to illustrate the domestic life and art of the tribes from whom the largest number of the specimens were obtained. It includes, in addition to pottery, implements of war and hunting, articles used in domestic manufactures, articles of clothing and personal adornment, basketry, trappings for horses, images, toys, stone implements, musical instruments, and those used in games and religious ceremonies, woven fabrics, foods prepared and unprepared, paints for decorating pottery and other objects, earths of which their pottery is manufactured, mineral pigments, medicines, vegetable dyestuffs, &c. But the chief value of the collection is undoubtedly the great variety of vessels and other articles of pottery which it contains. In this respect it is perhaps the most complete that has been made from the pueblos. Quite a number of articles of this group may perhaps be properly classed as “ancient,” and were obtained more or less uninjured; but by far the larger portion are of modern manufacture.

ARTICLES OF STONE.

These consist of pestles and mortars for grinding pigments; circular mortars, in which certain articles of food are bruised or ground; *metates*, or stones used for grinding wheat and corn; axes, hatchets, celts, mauls, scrapers, &c.

The cutting, splitting, pounding, perforating, and scraping implements are generally derived from schists, basaltic, trachytic, and porphyritic rocks, and those for grinding and crushing foods are more or less composed of coarse lava and compact sandstones. Quite a number of the metate rubbing stones and a large number of the axes are composed of a very hard, heavy, and curiously mottled rock, a specimen of which was submitted to Dr. George W. Hawes, Curator of Mineralogy to the National Museum, for examination, and of which he says:

"This rock, which was so extensively employed by the Pueblo Indians for the manufacture of various utensils, has proved to be composed largely of quartz, intermingled with which is a fine, fibrous, radiated substance, the optical properties of which demonstrate it to be fibrolite. In addition, the rock is filled with minute crystals of octahedral form which are composed of magnetite, and scattered through the rock are minute yellow crystals of rutile. The red coloration which these specimens possess is due to thin films of hematite. The rock is therefore fibrolite schist, and from a lithological standpoint it is very interesting. The fibrolite imparts the toughness to the rock, which, I should judge, would increase its value for the purposes to which the Indians applied it."

The axes, hatchets, mauls, and other implements used for cutting, splitting, or piercing are generally more or less imperfect, worn, chipped, or otherwise injured. This condition is to be accounted for by the fact that they are all of ancient manufacture; an implement of this kind being rarely, if ever, made by the Indians at the present day. They are usually of a hard volcanic rock, not employed by the present inhabitants in the manufacture of implements. They have in most cases been collected from the ruins of the Mesa and Cliff dwellers, by whose ancestors they were probably made. I was unable to learn of a single instance in which one of these had been made by the modern Indians. In nearly all cases the edges, once sharp and used for cutting, splitting, or piercing, are much worn and blunt from use in pounding or other purposes than that for which they were originally intended. On more than one occasion I have observed a woman using the edge of a handsome stone axe in pulverizing volcanic rock to mix with clay for making pottery. Nearly all the edged stone implements are thus injured. Those showing the greatest perfection were either too small to utilize in this manner or had but recently been discovered when we obtained them.

The grinders and mortars are frequently found composed of softer

rock, either ferruginous sandstone or gritty clays. For a more complete knowledge of these stone implements we must depend on a comparative study of large collections from different localities, and such information as the circumstances attending their discovery may impart, rather than upon their present condition or the uses for which they are now employed.

Metates or grain-grinders, pestles and rubbing stones belong to the milling industry among the Indians. The metates are generally quite large and heavy, and could not well be transported with the limited means at the command of Indians. They are therefore well adapted to the uses of village Indians, who remain permanently in a place and prosecute agricultural pursuits. They are generally of rectangular shape, and from 10 to 20 inches in length by 6 to 12 in width, and are composed of various kinds of rock, the harder, coarse-grained kinds being preferable, though in some instances sandstone is employed; the most desirable stone is porous lava. These stones are sometimes carried with families of the Pueblos moving short distances to the valleys of streams in which they have farms in cultivation. In the permanent villages they are arranged in small rectangular bins (see Fig. 508), each about 20 inches wide and deep, the whole series ranging from 5 to 10 feet in length, according to the number of bins or divisions. The walls are usually of sandstone. In each compartment one of these metates or grinding stones is firmly set at a proper angle to make it convenient to the kneeling female grinder. In this arrangement of the slabs those of different degrees of texture are so placed as to produce an increased degree of fineness to the meal or flour as it is passed from one to the other. But a small number of these slabs were collected on account of their great weight. Accompanying these metates are long, slim, flat stones, which are rubbed up and down the slabs, thus crushing the grain. These hand-stones are worn longitudinally into various shapes; some have two flat sides, while the third side remains oval. The same variety exists in regard to the texture of these rubbing-stones, as in the concave grinders.

The pueblo of Zuñi, from which the most important portion of the collection was obtained, is situated in New Mexico, near the western border, about two hundred miles southwest from Santa Fé.

At the time of Coronado's visit to this country the pueblo was located at what is now known as "Old Zuñi," on the summit of a high *mesa*. The modern Zuñi is situated upon a knoll in the valley of the Zuñi River, about two miles from the site of the old town. Certain writers have regarded Zuñi, or rather "Old Zuñi," as one of the "Seven Cities of Cibola." The evidences found at and around both the old and present Zuñi are certainly not sufficient to warrant this view, and further and more careful investigations are necessary.

Zuñi, although lying on the line of travel of military expeditions, emigrant trains, and trade between the Pacific coast and the Rio Grande, the foreigners visiting them have seldom remained long in their village;

nor has the advancing wave of Caucasian settlement approached sufficiently near to exert any marked influence on their manners and customs; at least the form and decoration of their pottery bear no marked evidence of the influence of the more highly civilized races.

The collection made here by the expedition was more extensive than that from any other place, and numbers about fifteen hundred objects, of which by far the larger part is composed of earthenware articles. These include large and small water vases, canteens of various sizes and shapes, cooking cups, and pottery baskets used in their dances, paint-pots, ladles, water jugs, eating bowls, spoons, pepper and salt boxes, pitchers, bread-bowls, Navajo water jugs, treasure boxes, water vases, cups, cooking pots, skillets, ancient pottery, animals, and grotesque images. It belongs mostly to the variety of cream-white pottery, decorated in black and brown colors; a portion is red ware, with color decorations in black. There are also several pieces without ornamentation, and one or two pieces of black ware, but the latter were most probably obtained from other tribes, and possibly the same is true in reference to a few pieces of other kinds which present unusual figures or forms.

A slight glance at the figures depicted on the *tinajas*, or water vases, will suffice to show any one who has examined the older pottery of this region, specimens and fragments of which are found among the ruins, that a marked change has taken place in their ideas of beauty. Although the rigid, angular, zigzag, and geometric figures are yet found in their decorations, they have largely given way to curved lines, rounded figures, and attempts to represent natural objects.

A few apparently conventional figures are still generally retained, as around the outside of the necks of the vases and on the outer surface of the bowls, probably suggested originally by the rigid outlines of their arid country, and in fact by their buildings. The figure of the elk or deer is a very marked feature in the ornamentation of their white ware, and is often found under an arch. Another very common figure is that of a grotesquely-shaped bird, found also on the necks of water vases and the outer surface of bowls.

ARTICLES OF CLAY.

Tinajas, or water vases, are called in the Zuñi tongue *tkāh-wi-nā-kā-tēh-le*. They are usually from 8 to 12 inches in height, and from 12 to 15 in diameter. A smaller size of the same form of vessels, which are from 5 to 7 inches in height and from 8 to 10 in diameter, are called *det-tsān-nā*. They are of three colors, cream white, polished red, and black:

there are in the collection comparatively few of the second, and but one of the last variety. The decorations are chiefly in black and brown, but four or five pieces being in black. The decorations of the cream-white group present some four general types—those represented by Figs. 359, 363, 364, and —, in which the uncolored circular space forms the distinguishing characteristic; those of which Fig. 360 may be considered a representative, of which type there are but two specimens in the collection; those represented by Fig. 361, and those distinguished by the rosette (see Figs. 366, 367, 368, and 370).

The following appear to be unique: (39035) Fig. 371, (40785) Fig. 375, (41149) Fig. 372, and (41167) Fig. 374.

By a careful study of these decorations we find that they consist chiefly of the following figures, which are combined in various ways: triangular figures, usually on the neck; large open circles, frequently in a diamond figure, as in Fig. 359 (39871); scrolls; or arches as in Figs. 361, 362, &c.

In no instance do we find the meander or Greek fret on these, or in fact any other Zuñi vessels. A marked characteristic of the decorations on the pottery of this pueblo is the absence of vines and floral figures so common on those of some of the other pueblos. The nearest approach to the vine is the double line of scrolls seen in (40785) Fig. 375. Although the checkered figure is common on bowls, the Zuñi artists have appreciated the fact that it would be out of place on the convex surface of the water vase. The elks or deer—for it is difficult to tell which are intended—are usually marked with a circular or crescent-shaped spot, in white, on the rump, and a red diamond placed over the region of the heart, with a line of the same color extending from it to the mouth, both margined with white; the head of the animal is always toward the right.

As will be observed by examining the decorated pieces, the surface is divided into zones by lines—sometimes single, sometimes double, but generally slender—one near the base, one or two around the middle, one at the shoulder, and one at the rim; thus forming one zone embracing the neck, and two or three on the body, exclusive of the undecorated base. Sometimes there is but one zone on the body as seen in Figs. 364 (40322) and 359 (39871); sometimes two, as shown in Figs. 367 (40317) and 370 (41146); but often three, the middle one quite narrow, as seen in Figs. 361 (39934) and 362 (41150). Although not always shown in the figures, the lines at the rim, shoulder, and bottom are seldom wanting in Zuñi vases. The zones are often interrupted by broad perpendicular stripes or inclosed spaces in which circles, scroll figures, or rosettes are inserted.

Measurements of these vessels show considerable uniformity of proportion, the widely exceptional specimens being also exceptional in decorations. As indicating size and proportion I give here the measurements of some typical as well as some abnormal specimens.

The figures show the height, the diameter of the body at the widest part, and the diameter of the mouth in inches.

Number.	Height.	Diameter of body.	Diameter of mouth.
1.....	8.25	12.00	6.75
2.....	10.25	13.75	7.50
3.....	11.00	13.25	7.15
4.....	12.00	14.50	8.50
5.....	10.75	14.50	8.25
6.....	11.00	13.00	8.00
7.....	7.25	10.00	5.00
8.....	7.00	9.25	5.40
9.....	4.25	6.75	4.60
10.....	4.40	5.50	3.75
11.....	3.50	4.50	3.25
12.....	3.50	4.25	2.90
13.....	7.75	8.00	5.75
14.....	9.00	9.75	6.50

If we reduce these to proportion, using the diameter of body as the unit of measurement, the result is as follows:

Number.	Height.	Diameter of mouth.	Number.	Height.	Diameter of mouth.
1.....	.69	.56	8.....	.81	.59
2.....	.75	.54	9.....	.63	.68
3.....	.83	.54	10.....	.80	.68
4.....	.81	.58	11.....	.78	.72
5.....	.74	.57	12.....	.82	.68
6.....	.84	.61	13.....	.97	.72
7.....	.72	.50	14.....	.91	.67

From this it will be seen that No. 148, which is represented by Fig. 373 (39774), is unusually broad in proportion to the height. Nos. 152 and 153 vary to the extreme in the other direction; No. 153 is shown in Fig. 364 (40322). Excluding these and taking the means of the large and small kinds separately we find the average ratios to be as follows:

	Height.	Diameter of mouth.
Large.....	.78	.57
Small.....	.78	.61

Most of the water jugs of both the Shinumos and Zuñians are in the form of canteens, usually more or less spherical, and varying in capacity from a pint to four gallons. On each side there is a small handle in the form of a loop or knob, through or around which is placed a small shawl or strip of cloth, or a cord long enough to pass over the forehead so as to suspend the vessel against the back just below the shoulders. The other jugs are of various fanciful shapes, which will be noted in the catalogue. A large portion are of plain brown ware, a few plain white, and others white with colored decorations. Various names are used apparently to designate the different kinds rather than the uses for which they are intended.

The decorations, when present, are always on the upper side, which

is more convex than the lower, or side on which it is intended the vessel shall lie when not in use. In the ornamented white ware the lower portion is usually red or brown.

As all these clay fabrics are the work of North American Indians, it is scarcely necessary for me to say that they are unglazed, a characteristic, so far as I am aware, of all aboriginal pottery.

Some of the specimens, especially of the black ware, show a smooth finish, and may perhaps, without violence to the term, be classed as lustrous. This is not the effect of a varnish or partial glazing, but is a polish produced generally, if not always, by rubbing with a polishing stone.

Although, as a rule, the paste of which the ware is made is comparatively free from foreign matter, yet many pieces, especially of the decorated ware, when broken, show little whitish or ash-colored specks. These, when found in aboriginal pottery east of the Mississippi, have, I believe, been without question considered as fragments or particles of shell broken up and mixed with the paste. This may be correct in reference to the pottery found east of and in the Mississippi Valley, but this whitish and grayish matter in the pottery of the Indians of New Mexico and Arizona is in most cases pulverized pottery, which is crushed and mixed with the paste. Black lava is sometimes crushed and used in the same manner.

The principal material used is a clay, apparently in its natural state, varying in color according to locality. Although comparatively free from pebbles or lumps of foreign matter, we detect in some of the coarser specimens small particles of mica and grains of other materials, and in one broken specimen the elytron of a small coleopterous insect. But as a general rule, the paste appears to have been free from foreign matter.

A slight glance at this large collection is sufficient to show that the potters worked by no specific rule, and that they did not use patterns. While it is apparent that only a few general forms were adopted, and that, with few exceptions, the entire collection may be grouped by these, yet no two specimens are exactly alike; they differ in size, or vary more or less in form. The same thing is also true in reference to the ornamentation: while there is a striking similarity in general characteristics, there is an endless variety in details. No two similar pieces can be found bearing precisely the same ornamental pattern.

Much the larger portion of the collection consists of vessels of various kinds, such as bowls, cooking utensils, canteens, bottles, jars, pitchers, cups, ladles, jugs, water vases, ornamental vessels, paint-pots, &c. These vary in size from the large vase, capable of holding ten gallons, to the little cup and canteen, which will contain less than half a pint. The other and much smaller portion includes all those articles which cannot be classed as vessels, such as images, toys, toilet articles, representations of animals, &c. The collection can perhaps be most satis-

factorily classified by reference to the coloring, ornamentation, and quality, thus:

1. *The red or uncolored pottery*, which is without ornamentation of any kind. Some of this is coarse and rough, and in this case always more than ordinarily thick; but the larger portion has the surface smooth and often polished. The color varies from the natural dull leaden hue of the clay, to a bright brick red, the latter largely predominating.

2. *The brown ware*, or that which shows an admixture of mica. This, although uniformly without color decorations, is occasionally marked with impressed figures and lines. Although inferior in quality, being coarse and fragile, it presents more symmetrical though less varied forms than are usually found in the preceding group. The influence of contact with the European races is here very apparent, as, for example, in the true pitcher and other common utensils and an apparent attempt at glazing.

3. *The black ware* which is without ornamentation. This variety in quality and character is precisely like the polished red of the first group; but is slightly in advance of that in regard to finish, and perhaps, as heretofore remarked, may be classed as lustrous, while the red may be classed as semi-lustrous. The paste of which this black ware is formed appears to have been better prepared than that of the preceding varieties, and is the hardest and firmest in the collection.

4. *The cream-white pottery decorated in colors*. This extensive group, which includes fully two-thirds of the entire collection, embraces almost every known form of earthenware manufactured by the tribes from whom it was obtained. The paste of which it is formed is similar in character to that of the black ware. When broken the fracture shows very distinctly the effect of burning, the interior being of the natural leaden color, shading off to a dull grayish white as it approaches the outer surface. The opaque or creamy-white color of the surface is produced by a coating of opaque whitewash. Upon this white surface the figures are afterwards drawn.

The only colors used in decorating pottery are black, red, and some shade of brown. But of this we will speak more fully when we come to describe the peculiar methods practiced by the different tribes in making and adorning pottery.

Although there is a strong general similarity in this colored ornamentation, the great variety of details renders it difficult to classify the figures so as to convey a correct idea of them to the reader. We shall therefore have to refer him to the numerous cuts and the colored plates which have been introduced for the purpose of illustrating the catalogue.

The following general statement is about all that can be said in reference to them before descending to specific details.

So far as the coloring is concerned they are of two kinds, those having

the figures wholly black, and those which are partly black and partly brown or red. The differences in the decorated pottery appear to be always accompanied by certain other variations sufficient to warrant speaking of them as different varieties or groups. The former (those having the figures wholly black), which are made of the ordinary plastic blue clay, have only the upper half or two-thirds of the body of the vessel overlaid with the white coating for receiving the decorations, the lower part being uncoated, and of the natural pale red or salmon color produced by burning, but usually well polished. As additional distinguishing features of this group we notice that the shape is more generally globular, the workmanship rather superior, and the pottery somewhat harder and less friable than that of the other group; the angular and geometrical figures formed by straight lines are more common in this group; here we also find the meander or Greek fret correctly drawn, the vine, and several other designs rarely or never found in the other group. The figures of animals, which are common to both varieties, are in the former more usually distributed in zones or groups, while in the latter they are generally placed singly in inclosed spaces. The latter variety, in which we see the curve freely used, shows an evident advance over the ornamentation of the older pottery of this region; and while the figures must be classed as rude, and the outlines are less sharp, and not so well defined as in the older specimens, yet they indicate clearly a mental advance in the greater variety of conception.

The figures of this entire class, as regards forms, may be grouped under three general headings: first, the geometrical, which is the most common; second, the figures of animals; and, third, rude attempts at floral decorations, which forms are rather rare. Strange to say, in but few instances can any attempt at representing the human form or any part of it be discovered in these color decorations.

The geometric figures present an endless variety; but we notice, as is shown by the cuts and plates, that triangles with an elongate acuminate apex and the zigzag are very common in the black-brown decorations. The checkered figure also is not uncommon. The animals most frequently represented are the elk or deer and birds. The floral decorations are chiefly vines well drawn, and rude attempts at representing trees, and the flowers of various species of *Helianthus*.

5. *Red ware with color decorations.* This ware is represented by but few vessels, which are in every respect similar to the best variety of the red pottery heretofore mentioned, except that it is marked with figures in black, many of which are decorated only on the upper portions around the neck or rim.

6. *The ancient pottery*, of which Figs. 680 (40816) and 693 (40817) are good examples.

The Pueblo tribes of New Mexico and Arizona, with rare exceptions, manufacture earthenware vessels for domestic use. The Pueblo of Taos may be mentioned as one of these exceptions; although the manner of

living, the general habits, and characteristics of the tribe are similar to those of the other Pueblo Indians, and although they make use of pottery for domestic purposes, they do not manufacture it. Some pieces, such as water jars and vessels used for cooking, are made in the village, but this occurs only in such families as have intermarried with other tribes where the manufacture of the native ware is carried on.

The Pueblos among whom the manufacture of pottery or earthenware utensils may be classed as a conspicuous feature of their peculiar civilization at the present time, are situated geographically as follows: San Juan, Santa Clara, San Ildefonso, Cochiti, Santo Domingo, San Felipe, Sandia, and Isleta, located on the Rio Grande; Pojake, Tesuke, Nambe, Jemez, Zia or Silla, Santa Ana, Laguna, and Acoma, situated on the tributaries of the Rio Grande; Zuñi, and some small pueblos of the same tribe all within the borders of New Mexico. Zuñi however is located on the Rio Zuñi, which flows into the Little Colorado River.

The Moki pueblos, numbering seven in all, are embraced in what is called the Province of Tusayan, and are located within the Territory of Arizona, near its northeastern corner.

The Zuñians and Shinumos, although situated farther from civilized people and less influenced by their usages than any of the other Indians mentioned, surpass all the other tribes in the manufacture of all kinds of earthenware. The collections made from these tribes, as will be seen by reference to the catalogue, exceed, both in number and variety, those from all the others combined. The collection as enumerated in the catalogue includes specimens from all the pueblos referred to.

Although the uses of these articles are to a great extent the same among all the Pueblo tribes, and the shapes and forms are apparently similar, yet to the experienced eye there is no difficulty in detecting the peculiarities which distinguish one from the other, or at least in assigning them to the tribes with which they originated.

It will be observed by reference both to the colored and wood-cut illustrations that there are special distinctions between the ornamentation of the pottery of the pueblos of the Rio Grande Valley and of those situated on the tributaries of the Rio Colorado. In the decorations of the former the birds and vine are conspicuous and constantly recurring features, while in the Zuñi and Shinumo pottery the elk, domestic animals, and birds peculiar to these arid regions are the figures most frequently used. The difference is easily accounted for when we are informed of the fact that the former tribes reside in the valley of the Rio Grande, which is well adapted to the culture of the grape as well as other crops. The ever-present vine and the numerous birds which flock to this fertile valley will naturally suggest figures for decoration. On the other hand, the Zuñians and Shinimos reside in regions almost destitute of water, and hence without any attractive vegetation; therefore their designs are drawn chiefly from the sharp outlines of their dwellings, their domestic animals, birds, and the elk and antelope that graze in the little

grassy oases. None of these are actually drawn from nature, but from imagination and memory, as they never have an object before them in molding or painting.

In none of the cases referred to do we observe any attempts to imitate the exact forms or ceramic designs of the so-called ancient pottery, fragments and sometimes entire vessels of which are found throughout this southwestern region. This seems strange from the fact that in the use of stone implements we find but few which are the result of their own handiwork. The old ruins are searched, and from them, and the *débris* about them, stone pestles, mortars, hammers, hatchets, rubbing stones, scrapers, picks, spear and arrow heads, and polishing stones are collected by the inhabitants of nearly all the pueblos, and are kept and used by them.

The clay mostly used by the Zuñians in the manufacture of pottery is a dark, bluish, carbonaceous, clayey shale found in layers usually near the tops of the mesas. Several of these elevated mesas are situated near Zuñi, from which the natives obtain this material. This carbonaceous clay is first mixed with water and then kneaded as a baker kneads dough until it reaches the proper consistency; with this, crushed volcanic lava is sometimes mixed; but the Zuñians more frequently pulverize fragments of broken pottery, which have been preserved for this purpose. This seems to prevent explosion, cracking, or fracture by rendering the paste sufficiently porous to allow the heat to pass through without injurious effect. When the clayey dough is ready to be used a sufficient quantity is rolled into a ball. The dough, if worked by a careful artist, is first tested as to its fitness for molding by putting a piece of the paste to the tongue, the sensitiveness of which is such as to detect any gritty substance or particles, when the fingers fail to do so. The ball is hollowed out with the fingers into the shape of a bowl (this form constituting the foundation for all varieties of earthenware) and assumes the desired form by the addition of strips of the clay; all traces of the addition of each strip are removed before another is added, by the use of a small trowel fashioned from a piece of gourd or fragment of pottery, the only tool employed in the manufacture of pottery.

The bottoms of old water jars and bowls form stands for the articles while being worked by the potter. The bowls are filled with sand when objects of a globular form are to be made. Although I have often watched the process, yet in no instance have I ever observed the use of a potter's wheel, measuring instrument, or model of any kind. The makers, who are always females, depend entirely on memory and skill derived from practice to accomplish their work. The vessels when completely formed are laid in some convenient place to sun-dry. A paint or solution is then made, either of a fine white calcareous earth, consisting mainly of carbonate of lime, or of a milk-white indurated clay, almost wholly insoluble in acids, and apparently derived from decomposed feldspar with a small proportion of mica. This solution is applied to

the surface of the vessel and allowed to dry; it is then ready for decorations.

The pigments from which the paints are derived for decorative poses are also found in the vicinity of the mesas, and are employed by the Indians in the production of two colors, each of which varies slightly according to the intensity of heat in the process of baking, or the manner in which it is applied. One varies from a black to a blackish-brown, the other from a light brick red to a dark dull red color. The material which produces these colors is generally found in a hard, stony condition, and is ground in a small stone mortar, just as we reduce ink for use. When the pigment is properly reduced, and mixed with water so as to form a thin solution, it is applied with brushes made of the leaves of the yucca. These brushes are made of flat pieces of leaf, which are stripped off and bruised at one end, and are of different sizes adapted to the coarse or fine lines the artist may wish to draw. In this manner all the decorations on the pottery are produced.

The substance used in producing the black ware is a clayey black hematite, or ferruginous indurated clay, quite hard. The material to produce the red or brown colors is a yellowish impure clay, composed of oxide of iron; indeed it is mainly clay, but contains some sand and a very small amount of carbonate of lime. These are the principal ingredients and methods involved in the manufacture of Zuñi pottery.

The method practiced by the Zuñians in baking pottery differs somewhat from that employed by the tribes who make quantities of black and red ware. It seems to be a necessity on the part of the Zuñians to observe the greatest care in this operation. Their pottery is nearly always decorated and must be baked free from contact with the peculiar fuel used for that purpose. During the baking process it sometimes happens that a piece of the fuel, which is composed of dried manure, fully built up oven-shaped around the vessels to be baked, falls against the vessel. In every such instance a carbonized or smoky spot is left on the jar or bowl, which is regarded by the Indians as a blemish. The kiln is carefully watched until the fuel is thoroughly burnt to a white ash, when the vessels can be removed without danger of such blemishes.

The mode of manufacturing pottery adopted at the pueblos of the Rio Grande Valley is quite similar to that described as practiced by the Zuñi, Shinumo, Acoma, and Laguna Indians, but there is considerable difference in the method of decorating and polishing. Polishing is practiced chiefly by the Indians of the eastern pueblos, and but little by those of the more western region.

The pueblos of Santa Clara, Cochiti, San Juan, Tesuque, &c., manufacture large quantities of pottery for sale in addition to that made for their own use. It is in these eastern pueblos that the black polished ware is chiefly found, and it is in the production of this class of pottery that the chief difference in the ceramic art between the two sections exists. The clays used in the manufacture of this ware are of the

character as those of which the other is made; the paste is prepared in the same way, so that when the vessels are formed and ready for the kiln they are of the color of the original clay. In other words, the change to the black color is not produced in making the paste or in moulding or forming the vessel, but during the process of baking. The manner of forming the vessel is the same as with the western tribes; and when formed it is dried in the sun in the same way; after this a solution of very fine ochre-colored clay is applied to the outside and inside near the top, or to such parts of the surface as are to be polished. While this solution thus applied is still moist, the process of polishing begins by rubbing the parts thus washed with smooth, fine-grained stones until quite dry and glossy. The parts thus rubbed still retain the original red color of the clay. The vessels are again placed in the sun and allowed to become thoroughly dry, when they are ready for baking. It is in this part of the process that the great differences in color are produced. The vessels are placed together in a heap on a level spot of ground and carefully covered over with coarsely broken dried manure obtained from the corrals. The kiln thus formed is then ignited at several points.

It is proper to add here that the clays used by the Santa Clara Indians are of a brick-red color, containing an admixture of very fine sand, which, no doubt, prevents cracking in burning, and hence dispenses with the necessity of using lava or pottery fragments, as is the custom of the Indians of the western pueblos. The burning is carried on until a sufficient degree of heat is obtained properly to bake the vessels, which still retain their original red brick color. At this juncture such of the vessels as it is desired have remain in that condition are removed from the fire and allowed to cool, when they are ready for use. Those which the artists intend to color black are allowed to remain and another application of fuel, finely pulverized, is made, completely covering and smothering the fire. This produces a dense, dark smoke, a portion of which is absorbed by the baking vessels and gives them the desired black color. It is in this manner that the black ware of these eastern pueblos is produced.

It is said that among the Cochiti, Santa Clara, and some other Pueblos a vegetable matter is employed to produce some of their decorative designs; this, however, I was unable to verify, though some of the Indians assured me of the fact, and furnished me a bunch of the plant, which Dr. Vasey, of the Agricultural Department, found to be *Cleome integrifolia*, a plant common throughout the Western Territories. A few specimens of the ware, some burnt and some unburnt, said to be decorated with the oil or juice of this plant were secured.

As heretofore remarked, notwithstanding the variety in ornamentation, there are really but few different figures, and these are mostly quite simple. Any one interested in the study of Indian art can find in the

figures and plates of this catalogue all the original conceptions of artists of the Pueblo Indians as depicted by them.

While it is of value in the study of ethnology, and as affording means of comparison in the study of archæology, there is nothing in composition or ornamentation, or in the form of the vessels, that certain artists of the civilized races would desire to copy.

As a means of reference in the study of ancient American pottery, I consider the collection invaluable, as it can scarcely be possible that the forms and decorations contain nothing that has been handed down from a former age. Although the figures used have no symbolic characters connected with them in the mind of the modern artist, yet it is more than probable that at least some of them did have such a meaning to the ancient artists. For example, the little tadpole-shaped figure on the clay baskets used in their dances and sacred ceremonies by the Zuñians is understood by them to represent a little water arctic which, as heretofore stated, is probably the larva of some insect crustacean, very common in the pools and sluggish streams of the country inhabited by these Indians. Now, it is possible that this figure has been used with the same meaning from time immemorial, but I find, as pointed out to me by Prof. Cyrus Thomas, that almost exactly the same figure is on a vessel pictured on Plate VII of the manuscript Troano, where a religious ceremony of some kind is evidently represented. The same figure is also found in Landa's character of the Maya day *Cib*, a word signifying copal, a gum or resin formerly used in religious ceremonies as incense. I find also on Plate XXX of the same manuscript the figures of bowls or pots with legs similar to those of the Zuñi. I do not point out these resemblances as proof of a relation between the two races, but as mere illustrations of what possibly may be learned by a careful study of the forms and decorations of the pottery. It may also be well to add here another fact to which Prof. Thomas calls my attention, viz., the similarity between the manner of wearing the hair by the Shinumo women, *i. e.*, in knots at the side, as represented by the female images, and that of the ancient Maya women shown in numerous figures on the manuscript Troano. Any one familiar with General Cesnola's collection from Cyprus cannot fail to be reminded of it when he examines this collection of Indian pottery; especially the colors used and the general character of the specimens; but an illustration of the two collections is necessary in order to have this general resemblance brought to mind, as it does not appear so distinctly in a comparison of the published figures only. The figures on Plate I of his "Cyprus" bear quite a striking resemblance to those on the specimens of Cochiti ware. The quadruple cup, Fig. 25, page 4, is almost exactly like the Zuñi quadruple cups, and was probably made for the same purpose. The same type of multiple cups is also seen in Plate IX of the same work. The two tea-pot-like vessels represented on Plate VIII, as well as the two bird-shaped pieces on the

plate, are much like the similar vessels of Cochiti pottery, several of which are figured in this catalogue.

The resemblance of this Indian ware, in the form of the vessels, to that found in the ancient mounds of this country is so marked that it is scarcely necessary to remind the reader of the fact, but it may be well to call attention to the much larger proportion of water vessels among the Indian pottery than is seen in collections from the mounds. This, however, may perhaps be accounted for by the scarcity of water in the western region.

The custom of the Zuñi artists of making a diamond or triangle over the region of the heart of the elk and deer figures with a line running to the mouth, although somewhat singular, is quite consistent with the Indian practice of symbolic writing. I was informed by the Zuñi Indians that it was intended to denote that "the mouth speaks from the heart." A similar mark occurs in the decoration of the vase figured in Cesnola's "Cyprus," page 268.

Contemporaneous and somewhat closely related tribes may use widely different figures in the decoration of their ware, and hence it is unsafe, in studying ancient specimens, to draw hasty conclusions from slight differences in this respect; and I think I may also safely add that a comparatively short period of time, a century or so at most, may suffice to bring about a great change in the same tribe in the form and manner of decorating their pottery. It also shows us that the ware of a given tribe, which does not bear the impress of civilized influence, can, by a careful study, be distinguished in nearly all cases from that of any other tribe. I feel so confident of the truth of this statement, that I would not hesitate to undertake to pick out all pieces of Zuñi ornamented ware from a collection of thousands of specimens of modern Pueblo Indian pottery if indiscriminately mixed together.

The Shinumo pottery in general appearance and form bears a strong resemblance to that of Zuñi; in fact it is almost impossible to separate the ornamented bowls and water vases of the two if mingled together. There are certain figures found in the one which never occur in the other, but there are a number of designs, especially of those most generally seen, that are quite common to the pottery of both tribes.

The different varieties of ware, the red or brown without decorations, the white with decorations, and the black are in general use with the tribe, and specimens of each are contained in the collection. But few specimens of the purely micaceous ware are found, either in Zuñi or Wolpi.

The preponderance of the large round water jugs in the Shinumo collection over that of Zuñi is noticeable. This form of vessel seems to be more in use by tribes whose villages are quite remote from water or which are situated on high mesas difficult of access. The kinds of vessels, however, which are common with the Zuñians are also common with the Shinumos, and those intended for the same use are generally of the same

shape or similar in form. But, as with the decorations, there are also vessels so markedly distinct and variant from those we find at Zuñi as to show very readily at least tribal distinctions between the ceramic artists and manufacturers.

The proximity of Laguna to Acoma led us to anticipate what we afterward found, viz., a great similarity in the forms of their vessels, and also in their manner of ornamentation. The principal differences consist in the more profuse use of the forms of birds and flowers, the first evidently representing prairie grouse and the last some form of sunflower. There is an absence of the geometrical forms, of lines and angles commonly observed on the works of more distant pueblos.

Quite a number of animal representations, made hollow for use as drinking vessels, were obtained, displaying grotesquely imitative forms of deer, elk, sheep, big-horn, antelope, and other animals with which they are familiar. All of these objects have more color laid on them than is to be found on the pottery of their neighbors of Acoma, the birds and animals being painted in a light rufous fawn color not in use elsewhere, and the only instance of the employment of green is on a tinaja of this pueblo used in coloring some foliage.

VEGETAL SUBSTANCES.

This class of ware comprises a very diversified group of objects; indeed, so great is the variety that I will not attempt a general description of them. Specific reference will be made to the objects as they occur in their places in the catalogue.

The objects of basketry or wicker-work are quite varied in form, construction, and decoration. Those made by the Zuñi Indians are so rude and coarse as not to entitle them to any merit. The larger baskets made by this tribe are used for carrying corn, melons, peppers, &c. The smaller are used for holding beans, shelled corn, and other coarse small materials.

The basketry of the Shinumos is of a finer and more finished quality. Among these are many jug or canteen shaped baskets, from which, no doubt, many of the forms of their pottery water vessels have been copied. These are sometimes globular, with large round bodies and small necks. They are generally very closely woven and are then coated over with a resin or gum which renders them capable of holding water. Like some of their water jugs, in pottery, they have small horse-hair ears or loops attached to the sides through which strings are passed for carrying them either over the head or shoulder. This class of water jug basketry all show evidences of age, and it is possible that they were manufactured by the Apaches or other tribes skilled in the art. The

flat kinds are designed to hold fine grain and meal, and are also frequently used for winnowing. This is done by placing a small quantity of grain in the basket, and by a skillful motion throwing the grain up into the wind and again catching it as it comes down. This motion is kept up until the wind has separated the chaff from the grain. Many of the flat baskets are decorated in colors, as will be seen by the accompanying illustrations.

It is quite probable that most of the finer ware of this class is manufactured by the Apache Indians, who are celebrated for this work, and finds its way among the Pueblos through the medium of barter.

The basketry of the Zuñians is usually made of small round willows and the stem of the yucca, the leaves of which attain a long slender growth in that region. It is quite certain that the basketry used for holding water is not manufactured by the Zuñians, and probably not by the Shinumos, though many are found with them.

As previously stated, the basketry manufactured by the Shinumo Indians is of a more finished class and of a greater variety than that made and used by any of the other Pueblos, as will be seen by reference to the accompanying illustrations. Among the examples of this ware, obtained at Wolpi, is a large number of the flat or saucer-shaped kind; these vary both in size and character of construction as well as decoration. The manner of making one form of this class is quite interesting as well as curious. A rope-like withe of the fiber of the yucca, made quite fine, is wrapped with flat strips of the same plant. In forming the basket with this rope the workman commences at the center, or bottom, and coils the rope round, attaching it by a method of weaving, until, by successive layers of the rope, it attains the desired dimensions. These are quite highly and prettily ornamented in black, white, and yellow, and are compact and strong. Another variety of baskets of similar shape and size, and also fancifully ornamented, was obtained from the same Indians. These are made from small round willows. They exhibit less skill in construction, but are handsomely ornamented. Another kind was also obtained from the Shinumos, which, however, are attributed to the Apaches and probably found their way into the Moki villages through trade. These are large bowl-shaped baskets, almost water-tight, but generally used as flour and meal baskets. They are also ornamented black and yellow, produced by weaving the material of different colors together while making the basket.

There are many other forms and varieties, which will be referred to at the proper time, as they occur in the catalogue.

The Pueblos employ a variety of plants and herbs for medicinal and dyeing purposes, some of which were collected. Their botanical names were not determined, but they are indigenous to the regions inhabited by the Indians using them.

Ornaments and musical instruments employed in dances and religious ceremonies do not differ much among the Pueblo Indians; the princi-

pal ones being the drum, rattle, notched sticks, a kind of fife, and turtle-shell rattle. The latter instrument is the shell of a turtle, at the edges of which the toes of goats and calves are attached; this produces a very peculiar rattling sound. The shell is usually attached to the leg near the knee.

COLLECTIONS FROM ZUÑI.

ARTICLES OF STONE.

AXES, HAMMERS, AND MAULS.

1. (40139). Flat rubbing or grinding stone of silicified wood.
2. (40551). Stone axe, *ō'-lā-ki-le*, with groove near the larger end.
3. (40552). Imperfectly-made stone axe, *ō'-lā-ki-le*, grooved at each edge; basalt.
4. (40553). Large axe, with groove around the middle; sandstone.
5. (40554). Axe, grooved at the middle, square and flat on top; basalt.
6. (40555). Small centrally grooved axe; schistose rock.
7. (40556). Axe, grooved in the middle.
8. (40557). Axe, grooved near the blunt end, which is shaped similarly to the edge.
9. (40558). Axe, grooved near the end.
10. (40559). Small hatchet, *ō'-lā-ki-le*, of basalt doubly grooved, edge beveled from both sides, hammer end about one and a half inches in diameter.
11. (40560). Grooved axe, *ō'-lā-ki-le*, of fine black basalt, well polished; groove well worn. The face or side is intended to be near the holder when in use. Fig. 352. This specimen was found in Arizona, near Camp Apache, and was presented by Mrs. George P. Buell. It is one of the largest in the collection with such perfect finish.
12. (40561). Grooved in the center; of porous basalt.
13. (40562). Hammer grooved in the center, rounded off at each end.
14. (40563). Small hatchet-shaped instrument, square at the back, and rounded at the front edge.
15. (40563a). Rudely-made axe, grooved near the blunt end.
16. (40564). Small axe, with a groove round the body quite near the blunt end; basalt.
17. (40565). Axe, three and a half inches long.
18. (40566). Quite small, probably a hatchet, of firm basalt, grooved near the hammer end.
19. (40567). Much larger than the last, basaltic; groove quite deep and smooth, hammer end circular, large, and blunt.
20. (40568). Grooved axe of quartzitic rock.
21. (40569). Pick-shaped axe, grooved entirely around, with imperfect depressions which were in the water-worn boulder from which it was made; about six inches in length.
22. (40570). Boulder of sandstone with groove near the middle.
23. (40571). Flat basaltic boulder, grooved near the center, straight on the back, and tapering above and below the groove.

24. (40572). Small basaltic hammer and axe with groove near the large end.
25. (40573). Small grooved axe composed of hard sandstone; hammer end large, edge quite perfect.
26. (40574). Small boulder of basalt, ground to an edge at one end and rounded off at the other; doubly grooved.
27. (40575). Large basaltic stone considerably chipped off from pounding hard substances, grooved near the center, both ends quite blunt; probably used as a pounding stone.
28. (40576). Flat basaltic boulder, used as a pounder.
29. (40577). Basaltic hatchet grooved in the middle; quite rough.
30. (40578). Grooved axe of a very heavy, solid character, apparently designed more for mauling than cutting.
31. (40579). Large, heavy basaltic hammer and axe with groove around the body near the hammer end; about seven inches long.
32. (40580). Axe, grooved in the middle, upper or hammer end unusually long in proportion to the size.
33. (40581). Flat axe made from a water-worn boulder, oval in outline, both edges designed for cutting or splitting. Deep groove encircling the body, with protrusions above and below it to prevent the handle from slipping out; greenstone.
34. (40582). Hard, fine-grained sandstone axe wedge-shaped, without a groove.
35. (40583). Grooved axe with round body.
36. (40584). Fig. 349. Axe with a broad, shallow groove near the upper end, which is much narrower and smaller than the lower; of mottled volcanic rock, white, green, and black.
37. (40585). Axe grooved in the middle, irregular in shape, and much chipped off at the lower edge and rounded off at the top.
38. (40806). Made from a very fine, hard metamorphic rock, small enough to be classed as a hatchet; crescent-shaped at the top.
39. (40703). Fig. 348. A very dark brown axe, speckled with reddish spots. This axe bears a much finer polish than most of those in the collection.
40. (40704). Axe, grooved near the upper end, which is cone-shaped.
41. (40705). An almost square axe of basaltic rock, grooved on the sides, flat on top.
42. (40706). Axe of quartzitic rock, flat and thin; grooved.
43. (40900). Long, narrow axe, grooved near the upper end.
44. (40901). Axe, made from a water-worn boulder, almost to its present shape.
45. (40902). Small, round axe of basalt, having a shallow groove near the larger end.
46. (40903). Grooved basaltic axe.
47. (40904). Maul, with rough surface, one side flat, the other convex, with a groove.

FIG. 347

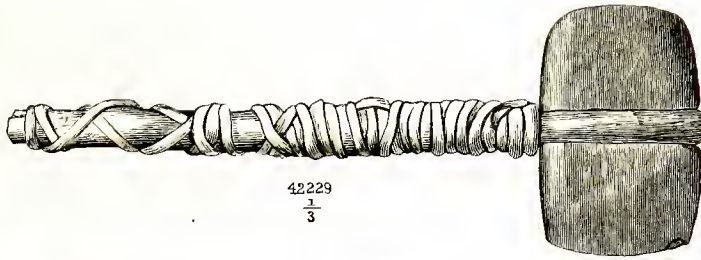


FIG. 348

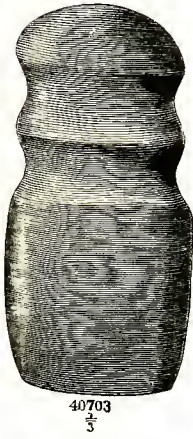


FIG. 349



FIG. 350



FIG. 351



FIG. 352



FIGS. 347-352.—Zufi Grooved Axes.

48. (40253). Double-grooved axe of porphyry, well polished and quite perfect.
49. (41260). Grooved axe of compact sandstone; wedge-shaped.
50. (42204). Stone maul of basalt, with groove; very rough.
51. (42205). Grooved axe of basalt. Fig. 351. This specimen was obtained at Fort Wingate, in New Mexico, but was probably found in or around some of the ruins.
52. (42229). This is one of the finest specimens in the collection, and, as shown by the cut, Fig. 347, has the handle attached, ready for use. This is formed of a willow withe bent round the axe and doubled, extending out far enough to form a handle and wrapped with a buckskin string; of compact basalt.
53. (42230). Shallow-grooved axe of basalt.
54. (42231). Axe, with a shallow groove near the larger end.
55. (42232). Axe of basalt, grooved on the sides.
56. (42233). Grooved axe, in size and shape the same as (42226).
57. (42234). Grooved axe of a peculiar black mottled rock, with white, marble-like streaks through it; groove surrounding it in the center.
58. (42235). Irregularly-shaped axe with a wide and deep groove surrounding it, curiously mottled with reddish and green streaks. Specimens of this kind are quite rare.
59. (42236). Grooved axe; sides well polished and exhibiting peculiar reddish spots.
60. (42237). Small grooved axe of metamorphic rock.
61. (42238). Grooved axe.
62. (42239). Small grooved axe of schistose rock, much flaked off at each end.
63. (42240). Axe, grooved on three sides; similar in size and shape to (42223).
64. (42241). Grooved axe with flattened top.
65. (42242). Same as the preceding.
66. (42242). Grooved axe with two edges.
67. (42244). Celt-shaped axe of basalt; it appears to have been used as a rubbing stone.
68. (39869). Zuñi maul with circular groove around the centre, used generally for grinding or pounding soft foods, such as red-pepper pods; of porous lava.
69. (39903). Double-edged axe, *ō'-lā-ki-le*, with groove around the middle; volcanic rock, from Zuñi. See Fig. 350.
70. (42349). Rounded end of a sandstone metate grinder converted into a flat hammer by grooving it at the opposite edges.
71. (41291). Pounder of sandstone. It was originally a common axe. Thumb and finger depression on the sides.
72. (40871). Lava Chili pounder with cap-shaped ends; grooved.
73. (40906). Lava rock pounder; small.

METATES, OR GRAIN-GRINDERS, AND PESTLES.

74. (40870). Square red sandstone metate.

75. (42280). Flat sandstone grinding slab.

76-82. The following numbers represent the rubbers accompanying the metates. The Indian name is *yä'-lín ne*: 76, (40909); 77, (40910); 78, (40911); 79, (40912); 80, (40913); 81, (40914); 82, (41259); sandstone rubber.

MORTARS, PESTLES, ETC.

These are found in use at all the pueblos, but are more common in Zuñi and the Moki villages than elsewhere, as these Indians use mineral pigments more extensively and in greater variety than any of the others.

The pestles and mortars obtained from these tribes are all too small to be used for any other purpose than grinding pigments. Many of them appear to be quite old, and were probably handed down from distant ancestors, or obtained from the ruins. Some of them are evidently of modern manufacture.

83. (40707). Mortar; a round, flat, quartzitic boulder with round cavity on one side about one inch in diameter and half an inch deep, and a square depression on the other about an inch deep and two inches in width; indigo still clinging to the surface of the depression.

84. (40708). Mortar of quartzite, the body nearly square and flat; depression round and about four inches in diameter, quite shallow.

85. (40709). Mortar of coarse-grained sandstone, almost perfectly round, the cavity quite deep, and lined with red ochre or vermillion.

86. (40710). Mortar of a flat sandstone with irregular rim about four inches in diameter.

87. (40711). Paint mortar of a small round quartz boulder.

88. (40712). Mortar of fine-grained sandstone about six inches long by three wide; sides square. This mortar was in use by the Zuñians for the purpose of grinding a pigment of yellowish impure clay, colored by the oxide of iron, with which they decorate their pottery, and which produces the brown and reddish-brown colors.

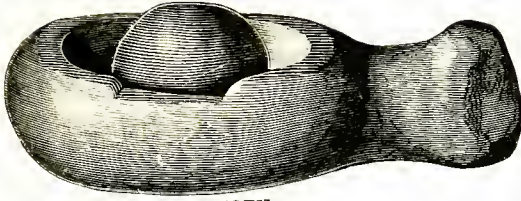
89. (40713). Small mortar of sandstone.

90. (40714). Mortar made from a flat water worn quartz boulder with a circular depression about half an inch deep. The bottom of this mortar shows evidence of its having been used as a grinding stone previous to being converted into a mortar, or it may have been used for both purposes, as both the paint cavity and the rubbing side show recent use.

91. (40715). Paint mortar of basalt, used for grinding the yellow pigment for ornamenting pottery; about four inches in diameter, cavity about one inch deep, bottom ground flat.

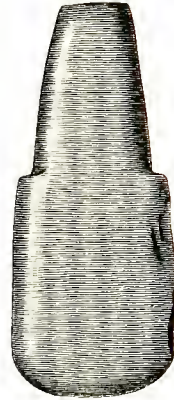
92. (40716). Flat paint mortar, of quartz rock, almost round, about an inch thick, depression quite shallow; used for grinding a pigment

FIG. 353



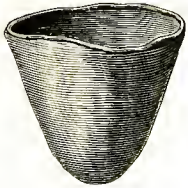
40731
($\frac{1}{3}$)

FIG. 355



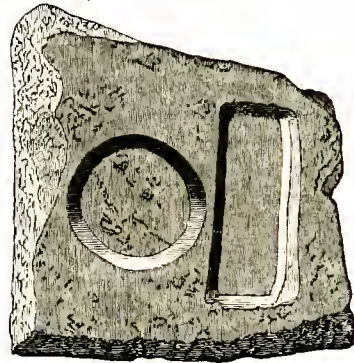
42245
($\frac{1}{3}$)

FIG. 354



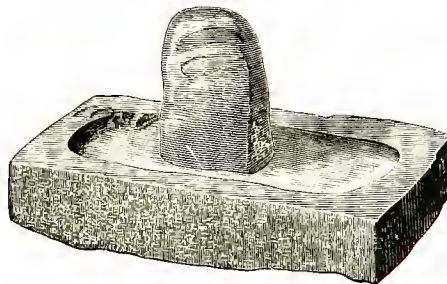
42266
($\frac{1}{3}$)

FIG. 356



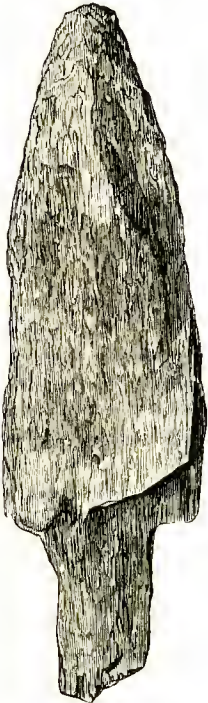
41239

FIG. 358



42272
($\frac{1}{2}$)

FIG. 357



40808
 $\frac{1}{4}$

FIGS. 353-358.—Stone Implements from Zuñi.

- of azurite or carbonate of copper, small nodules of which they collect at copper mines. This pigment is used in painting and decorating wooden images and gods.
93. (40717). Mortar similar to the above, and used for the same purpose.
94. (40718). Paint mortar made from a large irregularly round ferruginous sandstone. Used in pulverizing a reddish pigment for decorating pottery.
95. (40719). Mortar of a globular shape, made from a coarse-grained sandstone, used for grinding or mixing vermilion.
96. (40720). Paint mortar of sandstone. The whole mortar is only about an inch thick; made from a section of an old metate rubber.
97. (40722). Paint mortar of quartzite; blue pigment grinder. Size about four by three inches. This, like many of the flat mortars, has been first used as a rubbing stone and subsequently converted into a paint mortar.
98. (40723). Mortar made from a quartz boulder.
99. (40724). Sandstone mortar.
100. (40725). Paint mortar of sandstone, very flat.
101. (40726). Paint mortar, with oblong shallow depression; sandstone.
102. (40728). Square paint mortar; cavity about half an inch deep; sandstone impregnated with iron. Quartzitic pestle accompanying it.
103. (40729). Paint mortar of quartzite; almost square; depression almost worn through by use; quartz pebble pestle accompanying it.
104. (40730). Small round paint mortar of basalt, with white quartz pebble pestle.
105. (40731). Fig. 353. Paint mortar and pestle of quartz, with a knob on the end, which serves as a handle. This mortar was used in grinding an azurite pigment.
106. (40732). Mortar shaped somewhat like a ladle; the projecting end is provided with a small groove out of which the paint is poured.
107. (40733). Small sandstone mortar.
108. (40864). Paint mortar of sandstone.
109. (40868). Paint mortar of basalt, almost square.
110. (40869). Flat, square sandstone paint mortar; black water-worn pebble for pestle.
111. (40907). Chili or red pepper mortar of very porous lava rock; oval bottom, shallow cavity, about four inches thick and eight in diameter. These lava mortars may have been used for other purposes, but at the present time the Indians use them in crushing the pods and seeds of red pepper, and occasionally for crushing parched corn. They are quite common.
112. (40908). Food mortar of lava rock; square with flat bottom. Mortars of this kind are used in crushing grain and seeds.
113. (42272). Fig. 358. Paint mortar of very hard, fine-grained sandstone. The specimen is a very fair type of all the square paint

mortars and pestles. The depression is often square instead of round. In grinding pigments the Indians generally move the pestle backward and forward instead of around as is done by our druggists.

- 114. (41273). Small sandstone paint mortar, much like the preceding.
- 115. (40227). Small egg-shaped paint pestle of white quartz. The general name of these in Zuñi is *äh-shöe-tön-ne*.
- 116. (42276). Flat sandstone, circular and about five inches in diameter; used as a quoit; originally a rubbing stone.

MISCELLANEOUS OBJECTS.

- 117. (39755). Eight specimens not very well defined. They are flint flakes, showing, by their shape, that they were designed for scrapers and groovers, being flat or slightly concave on one side and oval on the other.
- 118. (41289). Fig. 356. This is a sandstone mould for shaping metal into such forms as suit the fancy of the Indians for bridle and other ornaments; one cavity is rectangular, about four inches long by one in width; the other about two inches in diameter. Silver, which has long been a metal of traffic among these tribes, is the one which is usually melted down for ornamental purposes. After it is taken from the mould it is beaten thin, then polished.
- 119. (41290). Is a portion of the same mould, with one cavity square and the other in the shape of a spear-head.
- 120, 121. (42266), Fig. 354, and (42267), are crucibles, which were used in connection with the moulds for melting silver and other metals. Many other ornaments are made in the same manner.
- 122. (40803). Fig. 357. This is a large, rudely chipped spear-head of mica schist, obtained at Zuñi, which was carried in the hand of one of the performers in a dance. It does not show any evidences of having been used in any other way. They called it *äh'-chi-än-tēh-ä-hla*.
- 123. (42245). Fig. 335. Handsomely-shaped and well-polished skinning knife of a remarkably fine-grained silicious slate. Above the shoulders on one side it is worn off to an oval surface, and is flat on the other.
- 124. (40915). Round sandstone, which is called a gaming stone; it is quite round, and bears the same name in Zuñi as the pestle, *äh-kä-mon-ne*.
- 125. (40916). Quartz stone, flat and rounded at the ends as a sort of last to keep moccasins in shape while being sewed; called *yä'-län-ne*.
- 126. (41239). String of alabaster beads, *tem-thla*.
- 127. (41240). Charm, representing the upper part of the body and head of a bird.
- 128. (41241). Charm; representing a horse; quartz.
- 129. (41242). Charm; bird's head and upper part of body.

FIG. 359



39871
($\frac{1}{5}$)

FIG. 360



39916.
($\frac{1}{4}$)

FIGS. 359, 360.—Zuñi Water Vases.

FIG. 361



39934.

(5)

FIG. 362



41150.

(4)

FIGS. 361, 362.—Zuni Water Vases.

130. (41243). Charm; horse and saddle.
131. (41244). Charm; representing entire bird; quartz.
132. (41245). Charm; head and upper part of body of a bird.
133. (41246). Charm; the same.
134. (41247). Agate arrow-head.
135. (40870). Disk of sandstone, slightly convex in the centre; used in games.
136. (42325). Flat sandstone slab, with the horns of male and female deer engraved on one side.
- 137, 138. (40721) and (41249). Flat sandstones, used for baking *wi-a-vi*, a thin, wafer-like bread, by heating the rocks and then spreading a gruel-like mixture of corn-meal over them. The largest one of these stones is about three feet in length by two in width. They are used by the Zuñi and Moki pueblos quite extensively.
139. (42324). Eighty chip flints and flakes of agate, quartz, chalcedony, &c.

ARTICLES OF CLAY.

WATER VASES.

140. (39871). Form and decorations shown in Fig. 359. The slender shading lines only are brown, the rest of the figuring black; the base in this as in most Zuñi pottery is reddish or slate colored. This may be considered as the type of one variety of decorations, readily distinguished by the unadorned circular spaces, the large scrolls, and the absence of animal forms. The larger forms of these vases are called by the Zuñians *kāh'-wi-nā-kū-tēh-le*; the smaller forms, *det-tsan-na*.
141. (39916). The ornamentation is well shown in Fig. 360. The combinations on this piece are rare on Zuñi pottery, and the chief figure on the body is more symmetrical than is usual in this group of ware. This may also be considered as representing a second type of decorations of which there is but one other example in the collection.
142. (39920). This belongs to the variety represented by Fig. 360, and varies chiefly in having the neck decorated with leaf-like figures, and in having the scrolls replaced by triangles with inner serratures.
143. (39934). The largest size; Fig. 361. The decorations of this piece belong to a third variety, distinguished chiefly by the presence of the elk or deer. Attention is called to the three figured zones or belts on the body, the upper with the arch inclosing an elk; the middle and narrow belt adorned with figures of birds with a long crest feather. The helix or scroll is freely introduced in this variety. The one here figured is typical of quite a large group. The animals are usually black, as are the lines separating the spaces.

144. (41150). This is similar in size and decorations to Fig. 361, and is shown in Fig. 362. The difference in the form of the bird in this from that in the preceding is worthy of notice.
145. (39933). Similar to No. 143 (Fig. 361); bird scrolls as in No. 144.
146. (40322). Medium size, represented in Fig. 364. It may be grouped in the variety of which Fig. 359 is given as the type.
147. (39936). Large size; decorations resembling those in Fig. 364, but with two belts of scrolls on the body.
148. (41154). Medium size; figures as in No. 147.
149. (41155). } Medium size; decorations similar to the preceding, except
150. (41162). } that No. 150 (41162) has figures of sheep on the neck.
151. (41158). Large size; the ornamentation of this piece, as will be seen by reference to Fig. 363, belongs to the variety represented by Fig. 359 and 364, but differs in having on the body a middle zone of bird-like figures.
152. (41161). Large size; similar to Fig. 363.
153. (39943). Decorations very similar to those shown in Fig. 359.
154. (39937). Medium size; ornamentation similar to that seen in Fig. 361.
155. (40312). Large size; shown in Fig. 365. As will be seen by comparison the decorations are the same as those in Fig. 361, except that the elk is omitted and a figure of scrolls introduced in its place.
156. (40310). Fig. 366. Large size. In the decorations of this piece we observe a new feature, a rosette or flower, showing a decided appreciation of the beautiful, either suggested by the flowers of the Helianthus or by something introduced by Europeans, but most probably the former. The different forms of this figure found on this ware furnish perhaps the best evidence of taste exhibited by the Zuñian artists.
157. (40313). Fig. 368. Large size. In this we see the same figures as in Figs. 363 and 366 brought into combination with the rosette, the birds being replaced by sheep.
158. (40318). Large size; similar to No. 149, except that the rosette is introduced in place of the circle.
159. (40314). } Decorations belong to the variety shown in Fig. 361.
160. (40316). }
161. (40317). Fig. 367. A little study of these figures will satisfy any one that although there is an apparently endless variety in details, there are, in fact, but comparatively few different figures.
162. (41146). Fig. 370. This belongs to the same variety as Fig. 368.
163. (40315). Large size, similar to that represented in Fig. 370, but varying in form, having the expansion at the shoulder more prominent and tapering more rapidly from thence to the base. The figures remind us of the trappings often seen in Japanese cuts.

FIG. 363



41158.
($\frac{1}{5}$)

FIG. 364



40322.
($\frac{1}{3}$)

FIGS. 363, 364.—Zuni Water Vases.

FIG. 367



40317.
($\frac{1}{5}$)

FIG. 368



40313
($\frac{1}{5}$)

FIGS. 367, 368.—Zuni Water Vases.

FIG. 369



40701.

($\frac{1}{4}$)

FIG. 370



40116.

($\frac{1}{4}$)

FIGS. 369, 370.—Zuni Water Vases.

FIG. 371



39935.

($\frac{1}{2}$)

FIG. 372



41149

($\frac{1}{2}$)

FIGS. 371, 372.—Zuni Water Vases.



FIG. 373



39774.

(1)

FIG. 374



41167.

(1)

FIGS. 373, 374.—Zuni Water Vases.

164. (40319). Medium size; decorations similar to those in Fig. 361, except that here the elk or deer stands on a broad black band in which there is a row of white diamonds.
165. (40321). Medium size; of the variety represented in Fig. 361, but in these smaller pieces the bird zone is omitted, and there is but one figured zone on the body. In this example a small elk is represented as standing on the back of a larger one.
166. (40700). Medium size, belonging to the same type as the preceding. On the neck are figures of grotesque kite-shaped birds.
167. (40701). Medium size; Fig. 369. This and the preceding one are not designated as vases in the original Smithsonian Catalogue, nor in my field list, but according to the form should be classed in this group.
168. (41165). Medium size; decorations similar to those of Fig. 367, but varying in having the figure of a bird introduced in the middle belt with a small double scroll arising out of the back. The lower belt has the same bird reversed.
169. (39935). Medium size. The unusual decorations of this piece are shown in Fig. 371. It differs, as does also Fig. 369, from the usual form; the body is more nearly spherical, the neck more gracefully curved, and the rim slightly flaring. The proportions are also different; height, 8.75 inches; diameter of body, 10; of mouth, 6.5.
170. (41144). } Decorations similar to those in Fig. 364; (41144) varies
171. (41147). } in having the figures of elk or deer on the neck and in the coarser or ruder scrolls.
172. (41149). This somewhat abnormal form is well shown in Fig. 372. It is of medium size.
173. (41152). This belongs to the same type, both as to form and decorations.
174. (41153). Large size; of the usual form, but the decorations on the body peculiar, the design being crudely architectural.
175. (41156). Medium size, belonging to the type represented by Fig. 361.
176. (41163). Medium size. This pretty vase has a somewhat peculiar decoration, which can be best described as a kind of patch-work representing small fragments of pottery.
177. (41166). Medium size, with the usual elk and scroll figures.
178. (41167). This specimen, which is rather above medium size, presents one of the most chaste designs in the entire group. It is represented in Fig. 374. Attention is called especially to the leaves and to the simple meander in the stripes.
179. (41168). Marked with the usual elk and scroll figures. Medium size.
180. (39774). The decorations of this piece, shown in Fig. 373, may be classed with the peculiar type with oblique and vertical bands represented in Fig. 374.
181. (39917). Figures similar to those in Fig. 363.

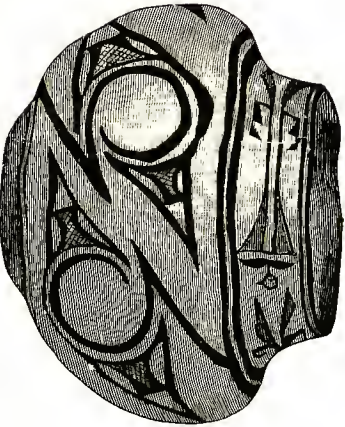
182. (40768). The decorations on this piece consist entirely of representations of pyramids or possibly of pueblos, and are arranged in bands, one on the neck and two on the body; the two upper bands show the figures inverted.
183. (40770). } No. 183 is decorated with scrolls and bird scrolls and a
184. (40771). } scalloped line around the shoulder; No. 184 with elks
and scrolls on the body.
- 185-188. 185, (40800). Fig. 378. The grotesque or kite-like bird seen on the neck, though rarely seen on the large water vase, is common on the small ones. To this type belong the following Nos. 186, (40769); 187, (40772); 188, (40791).
189. (40773). } These have the usual triangular and scroll designs with-
190. (40776). } out animal figures, as in Fig. 364.
191. (40792). Fig. 377. The decorations on this evidently belong to the same type as those represented in Fig. 359, the bird on the neck being the only variation. To this type also belong the following numbers: 192, (40778); 193, (40792); 194, (40794).
195. (40779). }
196. (40781). } These belong to the type represented by Fig. 361, dis-
197. (40783). } tinguished chiefly by the elk, triangular figures, and
198. (40787). } scrolls.
199. (40788). }
200. (40801). }
201. (40780). } The decorations on these are similar to those shown in
202. (40784). } Figs. 366, 367, 368, and 370, in which the rosette is a
203. (40786). } distinguishing characteristic. Nos. 201, 202, and 203
204. (40790). } are without figures of animals; No. 204 has a double
belt of elk figures between the rosettes.
205. (40782). The designs on this remain unfinished; except that the triangles on the neck and the arches in which it was evidently the intention to place the figures of animals, are shown.
206. (40785). Fig. 375. This pretty vase, as will be seen by reference to the figure, has the diameter greater in proportion to the height than usual. Although the design is tasteful the lines are coarse and not so well drawn as the figure indicates.
207. (40789). On this there is an evident attempt to represent a pueblo or communal dwelling and the ladders.
208. (40793). Shown in Fig. 376.
209. (40795). Neck and lower belt of the body marked with vertical lines and oblique diamonds; upper belt with inverted pyramidal figures.
210. (40849). Very small; marked with oblique scalloped lines.
211. (40850). Very small; elk and grotesque bird on the body.
212. (40851). Very small; decorations similar to those on the middle belt of Fig. 373.

Fig. 375



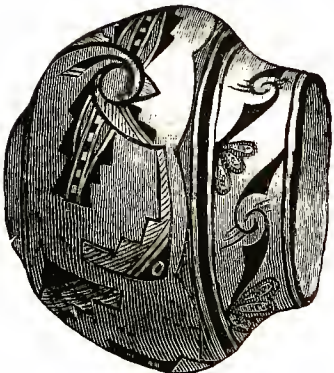
40785
(3)

Fig. 377



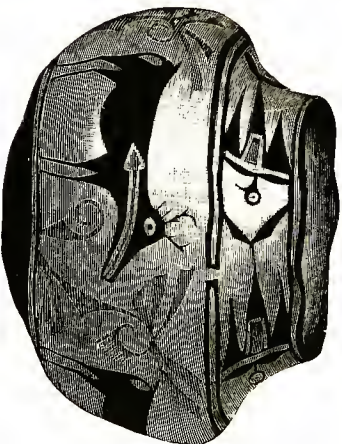
40797.
(4)

Fig. 376



40793
(3)

Fig. 378



40800.
(3)

Figs. 375-378.—Zuni Water Vases.



JULIUS BIEN, LITH

Figs. 379-384-ZUNI POTTERY
 $\frac{1}{2}$ NATURE.

213. (41105). Similar to that shown in Fig. 361.
 214. (40774). Marked with transverse lines and scrolls; design simple and unique.

The following specimens are red ware:

215. (40311). Large size; without ornamentation.
 216. (40775). Small; form peculiar, diameter of the body greatest at the base, mouth flaring; decorations in black, consisting of triangles pointing downwards, and lines.
 217. (40798). Medium size. See Fig. 381.
 218. (40799). } Small; without ornamentation.
 219. (40802). }
 220. (41145). Large. See Fig. 383.
 221. (41052). Medium size. See Fig. 384.
 222. (41151.) }
 223. (41157.) } Medium size; without ornamentation.
 224. (41159.) }
 225. (41160). Medium size; with a scalloped band in black around the rim and shoulder.

Black ware:

226. (39930). Large size; without ornamentation.

The only black water vase obtained at Zuñi; it was doubtless procured from some other tribe. The black ware obtained from this tribe is in nearly all cases used for cooking, or holding liquids or moist foods. As remarked in another place, the Zuñi black ware is generally small except in cases where large quantities of food are to be cooked, which occurs at feast times, when very large vessels are employed.

WATER JUGS AND JARS.

These vary so greatly in form that it is impossible to give any general description that would convey a correct idea.

227. (39885). Somewhat mug-shaped, with handle; the top is rounded to the small mouth, no neck. White ware with scalloped bands and a Maltese cross.
 228. (39886). Similar in form, but smaller, without handle or decorations.
 229. (39899). Somewhat similar in form to the preceding, except that it is lower and more depressed, and instead of a mouth at the top there is an orifice at the side as in the canteens, with which this should probably be classed.
 230. (39940). Similar to No. 228.
 231. (40062). Similar in form to No. 227, but without handle; with a double scalloped band around the constricted portion, and a single one around the mouth; figure of an insect on the upper half; apparently intended to represent a butterfly or large moth.
 232. (40608). Small unhandled jug in the form of a smelling bottle. Unadorned.

233. (40611). Similar to No. 232.
 234. (40697). } Like No. 228, with slight decorations.
 235. (40608). }
 236. (41140). An amphora or slender jug with two handles.
 237. (39528). A jar shown in Fig. 399.
 238. (39922). *Mē-hē tō*, canteen of large size. Plain brown, as are also the following specimens:
 239-242. 239, (40079); 240, (40081); 241, (40082), this has a small flower on one side; 242, (40083).
 243-245. 243, (40088); 244, (40090); 245, (40091).
 246-248. 246, (40085); 247, (40086), and 248, (40676), plain white.
 249. (40077). White with color decorations. Fig. 387.

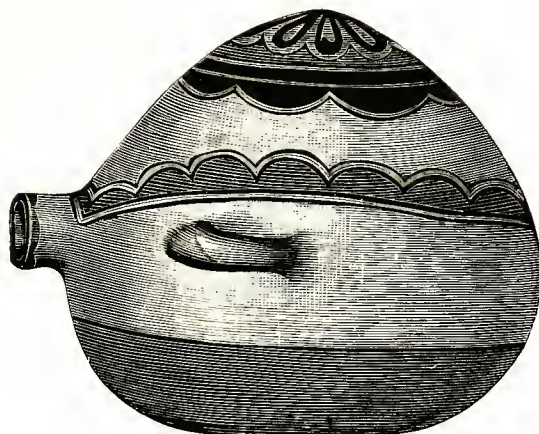
The following eight specimens are also white with colors:

250. (40078). Decorated profusely with scrolls, leaves, and other figures. See Fig. 400.
 251. (40080). Figure of a coiled snake or worm, without head or other character to indicate what it was intended to represent.
 252. (40084). Usual scroll figures.
 253. (40087). Decorated with simple loops and bands.
 254. (40089). Radiating serrate lines.
 255. (40092). Vase-shaped, with three colored bands.
 256. (40093). Shown in Fig. 385.
 257. (40886). Handsome piece, with floweret at the apex, scrolls on the side, and a scalloped band around the middle. The bands are always horizontal, the vessel being on its side. See Fig. 398.
 258. (39914). *Mē-hē-tō-tsān-nā*, canteens of small size. Red. Double, with two sets of handles and two chambers, but with only one orifice. Decorations in white, those on the larger piece consisting of meanders of the simplest form, a figure very unusual on Zuñi pottery.
 259. (39659). Brown, with handle and decorations in black. See Fig. 379.
 260. (39923). Plain brown.

The following are also plain brown, red, or yellow:

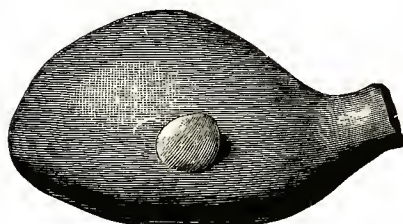
- 261-271. 261, (40094); 262, (40095); 263, (40096); 264, (40097), Fig. 390;
 265, (40099); 266, (40100); 267, (40101); 268, (40687), Fig. 386;
 269, (40688); 270, (40689); 271, (40690).
 272. (40102). White, with an oblique scalloped band.
 273. (39872). White, shown in Fig. 389.
 274. (40686). White, decorations as in Fig. 389.
 275. (40685). White, with a single flower.
 276. (40691). White, egg-shaped, with a single handle; decorated with a figure of the horned toad.
 277. (40692). White, form and decorations like those shown in Fig. 385.
 278. (40098). With outline figures of birds.
 279. (40695). White, shown in Fig. 388. Although obtained at Zuñi, this piece may have been manufactured at one of the other pueblos.

FIG. 385



40093
 $\frac{1}{3}$

FIG. 386



40687
 $\frac{1}{3}$

FIG. 387



40077
($\frac{1}{6}$)

FIGS. 385-387. —Zuni Canteens.

FIG. 388

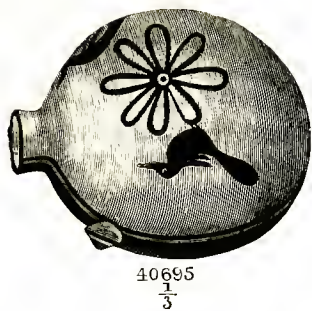


FIG. 389

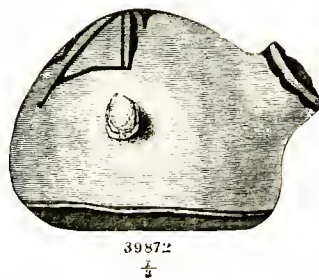


FIG. 390

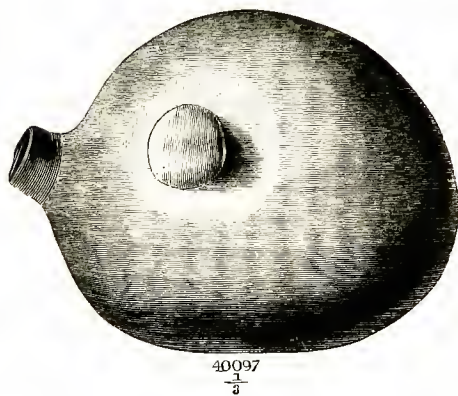
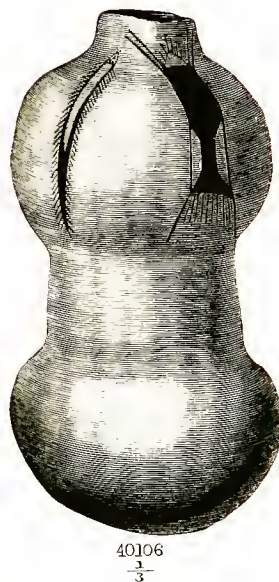
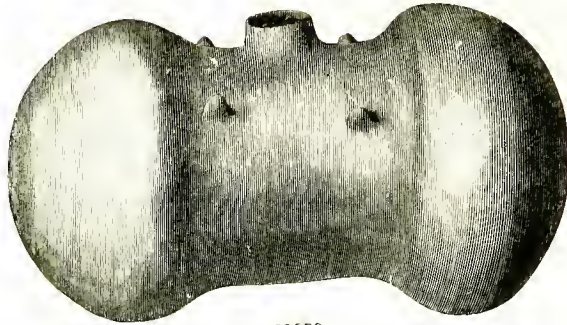


FIG. 391



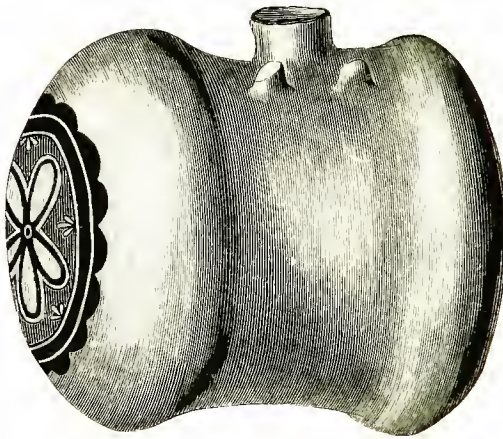
FIGS. 388-391.—Zuñi Canteens.

FIG. 392



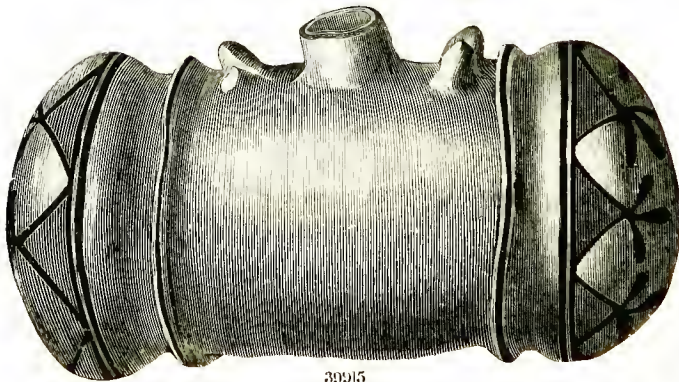
39259
 $\frac{1}{3}$

FIG. 393



40104
 $\frac{1}{3}$

FIG. 394



39915
 $\left(\frac{1}{3}\right)$

FIGS 392-394.—Zuni Canteens.

FIG. 395



39913
 $\frac{1}{3}$

FIG. 396



39837
 $(\frac{1}{3})$

FIG. 397



39914
 $\frac{1}{3}$

FIGS. 395-397.—Zuni Canteens.

JUGS OF FANCIFUL FORMS.

280. (39913). Fig. 395. Zuñi name · *Mē'-wi-i-pä-chin*.
 281. (39887). Similar to No. 280.
 282. (39889). Fig. 392. *Mē'-wi-kē-lik-tōn-ne*. Plain red.
 283. (39915). Fig. 394.
 284. (40103). White, bottle-shaped, with constriction below the middle; scalloped bands and bird figures around the upper third. See Fig. 402.
 285. (40104). Shown in Fig. 393.
 286. (40105). Similar to No. 285. Marked with the figure of a bird having the wings spread. Navajo. *Kō'-sē-tōm-me*.
 287. (40106). Fig. 391.
 288. (39887). Fig. 396. A double globed canteen; triangular, with orifice at upper convexity.
 289. (39914). Fig. 3 7. Red ware, with white lines on the lower globe and decorations in black on the upper, with orifice in each globe.

PITCHERS.

These are of the usual form of such vessels, except that they are generally without the lip. It is possible that to a certain extent they have been patterned after those observed in use among the Europeans or white races with whom these Indians have come in contact. But we shall presently find specimens similar in form among the ancient pottery found in the ruins of the cliff houses. We are inclined to believe that the form is original and not borrowed. The figures introduced will suffice to illustrate the form and usual decorations. The specimens obtained are generally small, varying in capacity from a pint to half a gallon. These are known in Zuñi by the name *Ē'-mūsch-tōn-ne*.

290. (39918). Shown in Fig. 403.
 291. (40668). With scalloped margin and decorations similar to those on Fig. 403.
 292. (40669). Without handle and should be classed with the cups. Figures of plants.
 293. (40671). Triangles on the upper portion; simple meander on the bowl.
 294. (40672). Similar to the following.
 295. (40673). With scalloped margin and zigzag lines on white ground; small right-angle handle.
 296. (40674). With scalloped marginal and middle bands.

The following are brown ware with but slight decorations:

- 297-310. 297, (40838); 298, (40839); 299, (40841); 300, (40843), outline figures similar to those on No. 293; 301, (40844); 302, (40887); 303, (40888); 304, (40889); 305, (40890), is really black but not polished; 306, (40891); 307, (40893); 308, (40894); 309, (40897); 310, (40898).
 311. (40842). Scalloped rim and similar in size and shape to 298, (40839).

312. (40845). Small, white, with decorations and of unusual form, in fact in the original field list is classed among the canteens. The mouth is prolonged obliquely in the form of a large tube. It should perhaps be classed with the water jugs.
313. (40892). Form and decorations shown in Fig. 405.
314. (40895). Scalloped margin; decorated with scrolls.
315. (40896). Scalloped margin. Figures of the little water animal so often represented on the earthenware baskets.
316. (40899). Without handle; diamond figures on the neck.
317. (41005). Fig. 406.
318. (41013). Slender neck and small mouth; jug-shaped, marked with twigs and leaves. This does not appear to be of Zuñi manufacture.
319. (41136). Fig. 407.
320. (40840). Shown in Fig. 404.

CUPS OR CUP-SHAPED VESSELS.

Under this general head are included two forms: one, closely resembling the true cup, as shown in the figures and to which the Zuñis apply the name *sāt-tsān-nā-mū-yā*, and those in the form of ollas or bowls, and without handles. The decorations of the true cup-shaped vessels, especially on the inner surface, follow somewhat closely the patterns found on the bowls. Here we see the zigzag marginal line, the scalloped bands, the interlaced or tessellated bands with star points, triangles, scrolls, &c.; but the elongate triangle or lance point is seldom present. As no new figure is introduced it is unnecessary for me to describe the decorations. A few are of red or brown ware.

The following numbers refer to true cups:

- 321–345. 321, (40058); 322, (40615); 323, (40616), Fig. 408; 324, (40617); 325, (40618); 326, (40619); 327, (40620); 328, (40621), Fig. 409; 329, (40622); 330, (40623); 331, (40624); 332, (40625); 333, (40627); 334, (40638); 335, (40639); 336, (40640); 337, (40641); 338, (40643); 339, (40644); 340, (40837); 341, (40847); 342, (40848); 343, (40880)—this is an unusually large cup and although having a handle may have been used as a bowl; 344, (40998); 345, (41148), an unburnt specimen.

The following are without handles and are either small bowls or paint cups:

- 346–355. 346, (40426); 347, (40436); 348, (40458); 349, (40642); 350, (40853), a small bowl-shaped cup, *sāt-tsān-nā*; 351, (40994); 352, (40995); 353, (40996); 354, (40997); 355, (41000).

EATING BOWLS.

The smaller forms are called *sāt-tsān-nā*.

356. (39962). Fig. 410. The ornamentation is typical of a variety very common on Zuñi bowls. The design on the outer surface is more constant than that on the inner, in which the figures of animals,



FIG. 398 (40886)



FIG. 399 (39926)



FIG. 400 (40076)



FIG. 401 (40486)



FIG. 402 (40103)

FIGS. 398-402 - ZUNI POTTERY.
1/2 NATURE

FIG. 403



39918
(1/4)

FIG. 404



40840
(1/4)

FIG. 405



40892
(3/5)

FIG. 406



41005
(1/4)

FIGS. 403-406.—Zuni Water Pitchers.

FIG. 407



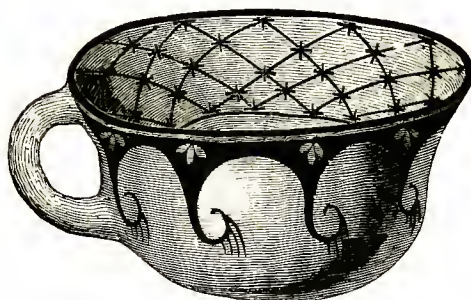
41136
($\frac{3}{3}$)

FIG. 408



40616
($\frac{1}{3}$)

FIG. 409



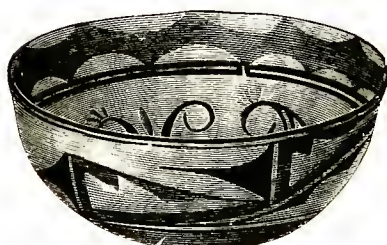
40621
($\frac{3}{3}$)

FIG. 410



39962
($\frac{1}{3}$)

FIG. 411



40266
($\frac{1}{4}$)

FIG. 412



40285
($\frac{1}{4}$)

FIGS. 407-412.—Zuni Water Pitcher, Cups, and Eating Bowls.

especially the elk, are sometimes introduced. The distinguishing feature of this type is the zigzag line on the inner margin.

The following numbers belong to the same type:

- 357-378. 357, (39746); 358, (39973); 359, (39975); 360, (39981); 361, (39984); 362, (39988); 363, (39989); 364, (39991); 365, (39993); 366, (39994); 367, (39997); 368, (39999); 369, (40004), duplicate of Fig. 411; 370, (40005); 371, (40231); 372, (40234); 373, (40236); 374, (40239); 375, (40246); 376, (40249); 377, (40250); 378, (40259).
- 379-396. 379, (40260); 380, (40266), shown in Fig. 411; 381, (40274); 382, (40285), shown in Fig. 412; 383, (40504); 384, (40512); 385, (40513); 386, (40516); 387, (40517); 388, (40519); 389, (40522); 390, (40527); 391, (40530); 392, (40541); 393, (40546); 394, (40528); 395, (40203); 396, (40211).
397. (39951). Decorated, on the inner margin only, with triangles.
398. (39952). Similar to that shown in Fig. 411, except that the inner marginal line is scalloped.

The following numbers may be classed in the same group:

- 399, 400. 399, (40205); 400, (40210).
401. (40521). Similar to No. 397, except that it has the interior below the marginal line decorated with scrolls.
402. (39902). Decorated on the inner surface only, with the usual scrolls; marginal band simply a narrow line or entirely wanting.

The following belong to the same type:

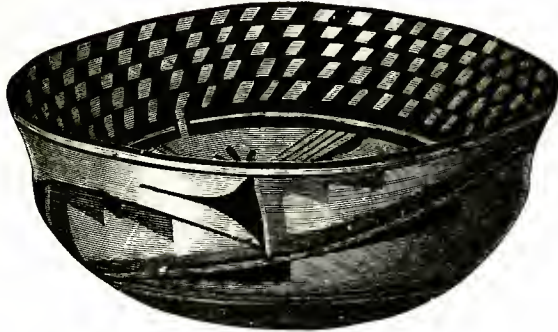
- 403-417. 403, (39960); 404, (40002); 405, (40006); 406, (40232); 407, (40233); 408, (40237); 409, (40263); 410, (40268); 411, (40284), in this small specimen there are but few figures; 412, (40503); 413, (40505); 414, (40520); 415, (40524); 416, (40981); 417, (40987).
418. (40906). The decorations of this piece belong to a variety which is readily distinguished by the broad checkered band on the inner margin.

There are two sub-varieties, one with and one without figures on the external surface. This and the following specimens belong to the latter group:

- 419, 420. 419, (40533); 420, (39890).
421. (40001). This belongs to the former group, as represented by Fig. 412.
422. (39898). External decorations as in Fig. 410, except that the lower margin of the oblique line is furnished with scrolls as in Fig. 375, inner surface with leaves, and a zigzag marginal line.
423. (39908). This and the following thirty-one specimens have the external surface ornamented as in Fig. 410, the decorations of the inner surface varying and differing from those already enumerated. In this the marginal line is simple.
424. (39909). Marginal line scalloped; central rosette of simple lines.
425. (39963). Zigzags in irregular lines, no marginal band; form semi-globular.

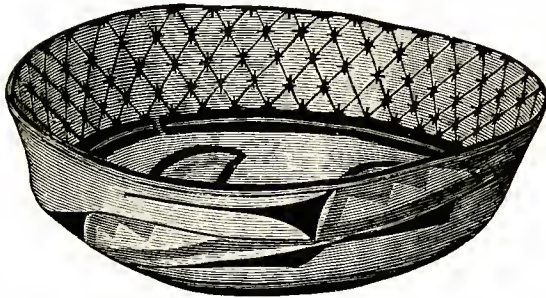
- 426. (39963). Triangles and scrolls; somewhat mug-shaped.
- 427. (39972). Usual form; decorations as in the preceding.
- 428. (39975). Ornamentation as represented in Fig. 422.
- 429. (39976). Double scrolls; no marginal bands.
- 430. (40000). Margin as in Fig. 422; no other inner decorations.
- 431. (40204). Scroll figures; no marginal band; form hemispherical.
- 432. (40216). Similar to Fig. 423, as are also the following specimens:
- 433-443. 433, (40218); 434, (40223); 435, (40238); 436, (40240); 437, (40284); 438, (40286); 439, (40501); 440, (40506); 441, (40507); 442, (40510); 443, (40514); the inner decorations of this piece vary in having the figures of the elk below the marginal band.
- 444-447. 444, (40515); 445, (40547); 446, (40985); 447, (40217). Zigzag marginal band; no other inner decorations.
- 448. (40241). Marginal band double, upper line undulate, lower, straight with star points.
- 449. (40245). Marginal band composed of rows of stars, as in Fig. 414.
- 450. (40251). Only the inner decorations consist of radiating serrate lines.
- 451. (40258). Similar to that shown in Fig. 424.
- 452. (40273). Inner decorations apparently intended as floral; marginal line very slender.
- 453. (40275). Inner figures; radiating scrolls.
- 454. (40287). Similar to No. 453.
- 455. (40558). Inner figures in the form of blocks or tiles; marginal band undulating.
- 456. (40549). Inner decorations consist of two narrow crenate bands, one marginal and the other just below it.
- 457. (39891.) This and the following thirty-nine specimens are without external ornamentation. In this one the inner figures are radiating scrolls, and birds.
- 458. (39892). Slender marginal scalloped band only.
- 459. (39893). Serrate marginal band only.
- 460. (39953). Similar to Fig. 424.
- 461. (39954). Birds with wings spread, and scrolls.
- 462. (39958). Differs from the usual form in having the margin undulating. The inner decorations consist chiefly of combinations of triangles. Similar to
- 463. (39971). Similar to the preceding.
- 464. (39959). Scrolls and triangles.
- 465. (39960). Scrolls and leaves.
- 466. (39961). Oblique serrate lines.
- 467. (39986). Broad net-work, marginal band, as seen in Fig. 414; form unusual, being constricted near the base.
- 468. (39992). Marginal band composed of sigmoid figures.
- 469. (39996). Very small; central diameter with rays from the points; the marginal band is simply a narrow line.

FIG. 413



40041
($\frac{1}{4}$)

FIG. 414



40033
 $\frac{3}{4}$

FIG. 415



40164
($\frac{1}{4}$)

FIGS. 413-415.—Zuni Eating Bowls.

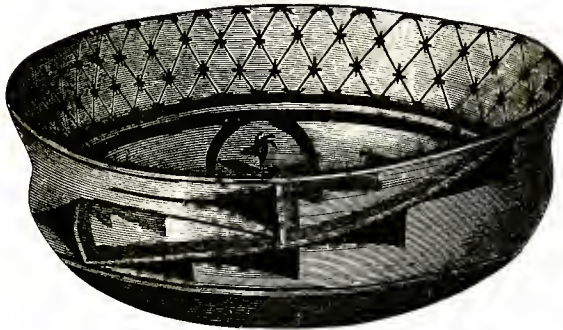
470. (40209). Ornamental marginal band only.
471. (40212). Scalloped marginal band, and central rosette or flower.
472. (40224). Scalloped marginal band, and figures of deer.
473. (40225). Zigzag band and the usual scroll figures.
474. (40229). Two slender bands, and central radiating scrolls.
475. (40242). Zigzag marginal line only.
476. (40248). Narrow scalloped marginal band ; no other figures.
477. (40252). Zigzag band and floral decorations.
478. (40253). No marginal band ; oblique triple and dotted lines.
479. (40265). Serrate marginal band and central rosette.
480. (40270). No band except a simple line bounding the central figure of radiating leaves.
481. (40272). Three plain bands.
482. (40481). Broad marginal band in figures arranged in square blocks.
483. (40485). Very small ; marginal net-work band, central floral figure.
484. (40490). Similar to the preceding.
485. (40489). Plain marginal band ; central floral figures.
486. (40492). Zigzag marginal band as in Fig. 425.
487. (40498). Marginal band as in Fig. 414.
488. (40499). Scalloped marginal band.
489. (40508). Zigzag band and floral decorations.
490. (40511). Marginal band composed of lines of stars.
491. (40530). Similar to No. 486, having also a central figure.
492. (40536). Marginal band of scrolls and triangles.
493. (40537). Net-work marginal band.
494. (40539). Scalloped band and central figure of twigs and leaves ; unusually chaste design.
495. (40542). Like No. 467.
496. (40545). Scalloped marginal band.
497. (39967). Do.
498. (39965). Zigzag inner marginal band ; figures of the elk externally and internally.
499. (39966). External and internal zigzag marginal band.
500. (39969). No external decorations ; marked internally with oblique lines, no band.
501. (39970). Scroll figures on the inner surface ; on the outer, triangles pointing in opposite directions ; no bands.
502. (39977). Dish-like, undulate, external and internal marginal band.
503. (39978). Inner band of crosses, and central figure, outer serrate marginal band.
504. (39982). } Decorations same as those represented in Fig. 414, with a
505. (39983). } wide, latticed, marginal band on the inner side of the bowl.
506. (39985). Both surfaces decorated with scroll figures.
507. (39987). Inner surface with scroll figures, outer with but a marginal scalloped band.

- 508. (39990). Both surfaces marked with oblique serrate lines; unusually flaring.
- 509. (39998). Inner surface with reversed elks; outer with oblique lines, with each side serrate.
- 510. (40007). Inner surface with serrate band and birds; outer with serrate band.
- 511. (40213). Elk and scrolls internally; an outer scalloped band.
- 512. (40215). Resembles No. 501.
- 513. (40219). The decorations on this bowl are unusual; those of the inner surface consist of a slender crenate marginal band, and below this a woman holding a child and apparently closely wrapped in a robe of some kind and placed transversely; the outer margin is marked with a broad band of crosses regularly spaced by perpendicular lines.

The following numbers belong to the type represented in Figs. 356, 411, and 412:

- 514-520. 514, (39979); 515, (40220); 516, (40221); 517, (40243); 518, (40274); 519, (40493); 520, (40523), inner marginal band consists of scrolls and triangles.
- 521. (40227). Inner marginal band broad and divided into diamond spaces; outer surface ornamented with figures similar to those on vase represented by Fig. 372.
- 522. (40230). Although classed with the bowls this is shaped somewhat like the paint pots; outer and inner bands.
- 523. (40247). Resembles No. 504.
- 524. (40254). Two broad undulate lines on the external surface; inner surface with blocks and scrolls.
- 525. (40256). Inside with crenate marginal lines, and circular space and triangles as in Fig. 359. External surface with a simple scalloped band.
- 526. (40264). External surface as in the preceding; internal scrolls and triangles.
- 527-533. 527, (40267); 528, (40269); 529, (40487); 530, (40495); 531, (40509); 532, (40529); 533, (40531). The decorations on these specimens belong to the same general type as those of No. 526.
- 534. (40271). Mug-shaped with flat bottom; outer surface marked with five scalloped bands; inner with scrolls.
- 535. (40279). Outer surface with triangular figures; inner with a scalloped marginal band and a similar band below.
- 536. (40482). Similar in form to No. 534. Outer and inner decorations consist almost entirely of triangles.
- 537. (40483). Without bands; interior, scrolls; exterior, geometrical figures.
- 538. (40488). This belongs to the type represented by Fig. 411; rosette on the inner surface.
- 539. (40491). Similar in form and decorations to No. 534.

FIG. 416



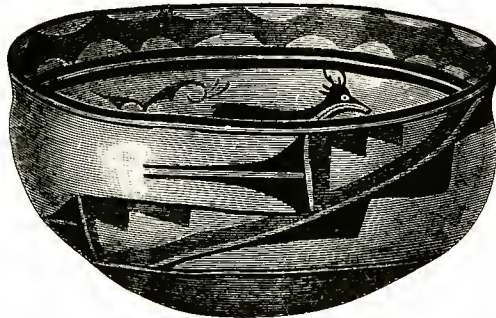
40296
($\frac{1}{4}$)

FIG. 417



40493
($\frac{1}{2}$)

FIG. 418



40176
($\frac{1}{4}$)

FIGS. 416-418.—Zuñi Eating Bowls.

540. (40496). Form like the preceding; inner face decorated with stars; outer with the usual triangular figures.
541. (40497). Flat, finger-bowl shaped, single scalloped band externally; scrolls and circular figures internally.
542. (40502). Double band of triangles externally; internally zigzag lines precisely like those in Fig. 371.
543. (40538). Inner serrate marginal band and radiating scrolls; no external decorations.
544. (40540). Central flower internally; a single serrate band externally.
545. (40980). Pan-shaped; inner surface marked with geometrical figures; outer without decorations.
- 546, 547. 546, (40988), 547, (40993). Without external ornamentation, marked with zigzag inner marginal line, central scroll, and triangular devices.
548. (40991). Oblique serrate lines externally; zigzag inner marginal line.
549. (40992). No external decorations; inner marginal line crenate; central flower.

Brown, red, or yellow ware. Usually without ornamentation.

550. (39907). Small rosettes or flowers on inner surface.

The following numbers are without ornamentation of any kind:

- 551-572. 551, (39968); 552, (40003); 553, (40207); 554, (40214); 555, (40226); 556, (40235); 557, (40244); 558, (40257); 559, (40276); 560, (40277); 561, (40278); 562, (40280); 563, (40281); 564, (40494); 565, (40526); 566, (40528); 567, (40534); 568, (40543); 569, (40544); 570, (40982); 571, (40984); 572, (40989).

The following have slight decorations; wherever the band is mentioned it is to be understood as marginal unless otherwise specified:

573. (39974). Narrow external band.
574. (39981). Floral figure on inner surface.
575. (39995). Triangles externally; narrow sub-marginal band internally.
576. (40206). Outline leaf-like figures on inner face.
577. (40222). Inner crenate band and cross lines.
578. (40229). Slender bands and scrolls.
579. (40288). Inner band of geometrical figures.
580. (40550). With slender outer band.
581. (40980). Inner zigzag band and triangular figures.
582. (40983). Inner central white flower.
583. (40990). Inner band of scrolls.

The larger forms, following, are called *I'-tön-ä-ka-säh-le*.

584. (40041). Represented in Fig. 413. The broad checkered band on the inner margin forms the distinguishing characteristic.

The following are similarly decorated:

- 585, 586. 585, (40010); 586, (40167).

587. (40033). As closely resembling the preceding, I introduce here a variety with a latticed marginal band shown in Fig. 414.

The following specimens belong to the same variety, the chief differences, being the inner central figures:

588. (40164). Fig. 415.

589. (40177). Do.

590. (40181). This specimen has no ornamentation except the band.

591. (40296). Fig. 416. This varies in having the figures of birds with wings spread and of elks on the inner surface below the marginal line. These are but partially shown in the figure.

592, 593. 592, (40965) and 593 (40955) belong to the same variety, but their inner decorations resemble more closely those represented in Fig. 415.

594. (40493). Fig. 417. The decorations on this piece belong to the very common variety shown in Figs. 356, 411, and 412.

595-600. To this type belong the following numbers: 595, (40008); 596, (40009); 597, (40012); 598, (40013); 599, (40020); 600, (40021), this varies in having no ornamentation on the outer surface.

601-608. 601, (40176), shown in Fig. 418; 602, (40031); 603, (40038); 604, (40043); 605, (40046); 606, (40047); 607, (40050); 608, (40052)

609-628. 609, (40151); 610, (40152); 611, (40163); 612, (40168); 613, (40170); 614, (40171); 615, (40175); 616, (40185); 617, (40186); 618, (40188); 619, (40189), Fig. 419; 620, (40191); 621, (40193); 622, (40194); 623, (40195); 624, (40196); 625, (40197); 626, (40199); 627, (40200); 628, (40293), this piece is properly a bread bowl, *Mō'-tsin-i-kā-sü-le*.

629-638. 629, (40295); 630, (40297); 631, (40298); 632, (40310); 633, (40305); 634, (40306); 635, (40308); 636, (40309); 637, (40930); 638, (40931), shown in Fig. 420. I would call attention here to the strong similarity of the inner decorations of this bowl with those on the body of the vase represented in Fig. 359. This is properly a bread bowl.

639-646. 639, (40938); 640, (40957); 641, (40958); 642, (40967); 643, (40971); 644, (40974); 645, (40975); 646, (41171), Fig. 421.

The following specimens have the same external decorations as those represented in Figs. 413-421, but differ in regard to the figures on the inner surface.

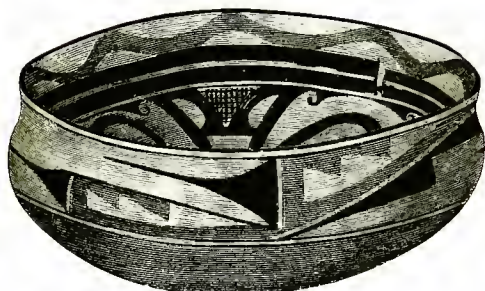
647. (40014). Fig. 422. The cut fails to show the figures of the elk placed among the scroll ornaments.

648, 649. 648, (40023); 649, (40026).

650-658. 650, (40028), shown in Fig. 423; 651, (40035); 652, (40042); 653, (40045); 654, (40049); 655, (40051), these two are bread bowls; 656, (40153); 657, (40156); 658, (40178).

659-663. 659, (40183); 660, (40198); 661, (40202); 662, (40927), Fig. 424; and 663, (40932), Fig. 425.

FIG. 419



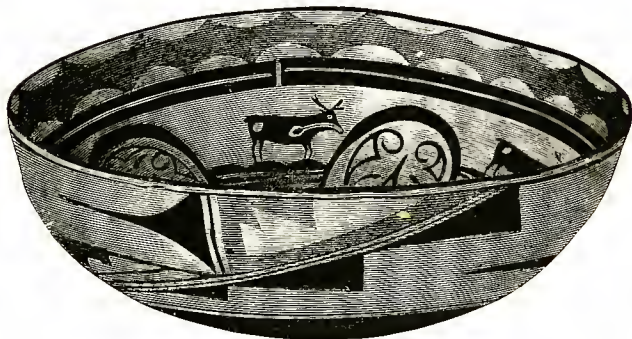
40139
($\frac{1}{4}$)

FIG. 420



40931
($\frac{3}{5}$)

FIG. 421



41171
($\frac{1}{5}$)

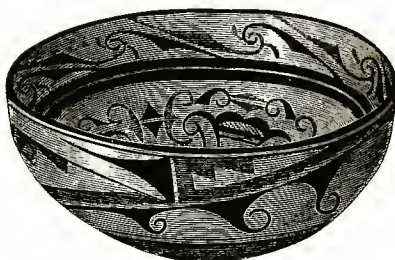
FIGS. 419-421.—Zuñi Eating Bowls.

FIG. 422



40014
($\frac{1}{2}$)

FIG. 423



40028
($\frac{3}{4}$)

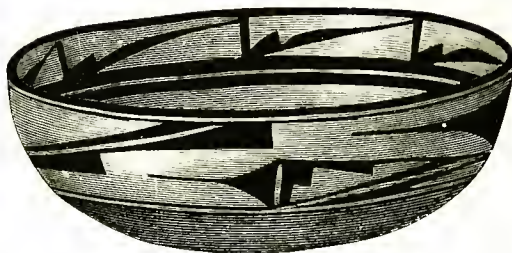
FIG. 424



40827
($\frac{1}{5}$)

FIGS. 422-424.—Zuni Eating Bowls.

FIG. 425



40932
($\frac{3}{4}$)

FIG. 426



40179
($\frac{1}{4}$)

FIG. 427



40200
 $\frac{1}{2}$

FIGS. 425-427.—Zuñi Eating Bowls.

- 664-669. 664, (40951); 665, (40952); 666, (40960); 667, (40976); 668, (40977); and 669, (40016), may be grouped together, as strongly resembling each other in regard to their inner decorations.
670. (40027). Inner marginal band with diamond spaces and colored triangles, scrolls, and small rosettes or flowers below.
671. (40030). No inner band; geometrical figures.
672. (40035). Narrow simple marginal band; elk and scrolls.
673. (40179), Fig. 426. Each of the following specimens has a similar marginal band, but the inner central figures differ.
- 674-682. 674, (40037); 675, (40044); 676, (40187); 677, (40300); 678, (40937); 679, (40966); 680, (40969); 681, (40973); 682, (40040). Patch-work figures, resembling pieces of broken pottery.
683. (40157). Somewhat like Fig. 424, the perpendicular lines of the band being doubly scalloped.
684. (40169). Marginal band a vine with leaves and flowers; central figures similar to those on vase shown in Fig. 371.
685. (40182). No inner band; scroll figures.
686. (40190). No inner band; elks and geometrical figures.
687. (40201). Marginal band with triple lines similar to those in Fig. 424.
688. (40290). Shown in Fig. 427.
689. (40292). Marginal band similar to that on Fig. 427; scroll figures in central portion.
690. (40294). Fig. 430. In this the outer decoration varies in having the elongate triangle or lance point double, and the inner in having the figure of a mule or donkey.
691. (40304). No marginal band; scroll figures.
692. (40302). Fig. 429.
693. (40486). A broad bowl; inner marginal band, the upper portion of which has a line of diamond spaces. The under side of the oblique line on the outer surface is bordered with scrolls as in Fig. 375. This is a very large specimen, being eighteen inches in diameter. See Fig. 401.
694. (40928). Inner surface marked with geometrical figures.
695. (40970). No figures on the inner surface.
696. (40972). Inner decorations as in Fig. 419.
697. (40017). No outer decorations; inner surface with marginal band and large white cross; remainder brown.
698. (40015). Outer and inner faces marked with triangles and slender leaves.
699. (40024). Outer scalloped band, scroll figures internally.
700. (40022). Outer surface with scalloped band and large oblique diamonds; inner with double scalloped band and scrolls.
- 701, 702. 701, (40158); 702, (40159). Outer face without decorations; inner with large vermiform figures.
703. (40166). Both faces with oblique lines of scrolls.
704. (40192). Stems and leaves externally and internally.

705. (40195). Interior decorations profuse; scrolls, and diamond-shaped figures.
706. (40934). Four scalloped bands on outer face; scroll figures on inner surface.
707. (40935). No outer decorations; inside marked with a marginal band of dots and lines; central scrolls.
708. (40939). Both surfaces with geometrical figures.
709. (40950). Marked externally with double lance points; internally with scrolls.
710. (39954). Shown in Fig. 428. Here we see the head of the grotesque bird reduced to a simple scroll.
Brown or yellow ware. Decorations in black or red, without external ornamentation unless otherwise stated.
- 711-713. 711, (40011); 712. (40936); 713, (40962). Four large leaves forming a cross.
714. (40018). Broad external band of horizontal and oblique dotted lines. No figures on the inner surface.
715. (40032). External scalloped band; reversed pyramids or pueblos internally.
716. (40039). Broad marginal band of half pyramids, alternately reversed.
717. (40048). White vermiform figures.
- 718, 719. 718, (40154); 719, (40184). These are similarly marked, the margin in both being also white.

The following specimens are without decorations of any kind:

- 720-733. 720, (40019); 721, (40036); 722, (40160); 723, (40162); 724, (40165); 725, (40180); 726, (40307); 727, (40929); 728, (40953); 729, (40954); 730, (40959); 731, (40962); 732, 40963); 733, (40968).
734. (40155). Patch-work.
735. (40172). Four serrate or scalloped bands on outer face. Similar inner marginal band in outline; and outline pyramidal figures.
736. (40174). Outline pyramidal figures.
- 737-739. 737, (40173); 738, (40289); 739, (40964). Marginal band of double outline scrolls.
740. (39618). Brown ware with decorations in black. Colored Fig. 380.
741. (39592). Brown ware with decorations in black. Colored Fig. 382.

COOKING VESSELS.

These vessels are generally of medium size, though in some instances the dimensions vary exceedingly. Those used in cooking for feasts are quite large, sometimes with a capacity of about ten gallons; the smallest, designed only for family use, are less than four inches in diameter and not quite three inches high. They are of two general forms, one similar to the ordinary pots used on cooking stoves, the other bowl-shaped. Two specimens in the collection are provided with legs; to these the Zuñians apply the name *sä-mū yēn-sä-qui-pä*. See Fig. 432. As a general rule, the rims of these vessels are flared, and on some of

FIG. 428



39954
(3)

FIG. 429



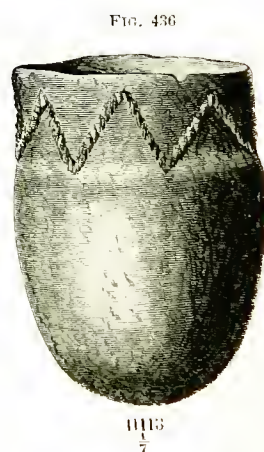
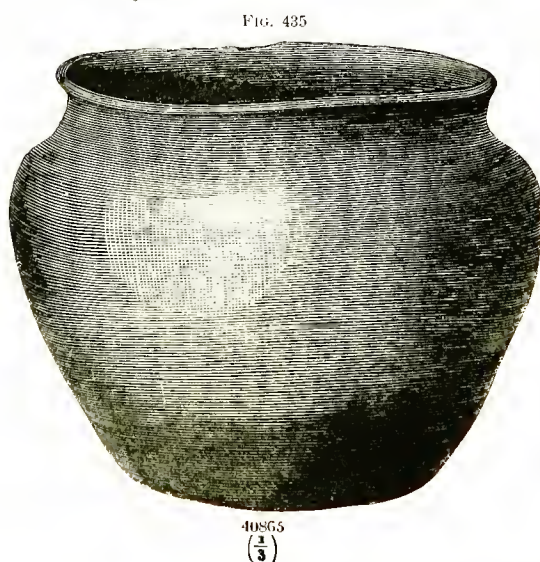
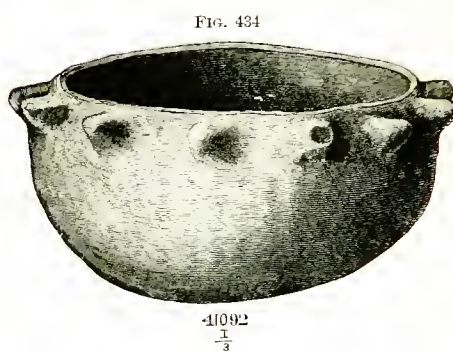
40302
(4)

FIG. 430



40294
(5)

FIGS. 428-430.—Zuñi Eating Bowls.



FIGS. 431-436.—Zuñi Cooking Vessels.

them, close to the rim on the outside, are ear-like projections, which are probably intended as catches by which, with pokers or sticks, they can be removed from or arranged in position on the fire. They are never ornamented, and have no coloring other than that which is acquired in baking. These vessels are used in cooking such foods as contain liquids.

Three names are applied to cooking pots, having reference to size, viz: *püh-tēh-le* is the large cylindrical pot; the smaller pot of the same form is *püh-tēhl-tsān-nā*; and *wāh-li-āh kă-tēhl-le* is the common cooking pot. The Olla or bowl-shaped pot, Fig. 433, is called *sü-mū-yēn*.

The following numbers belong to the *püh tēhl-tsān-nā* group and present no variations worthy of special notice.

742, 743. 742, (41113). Fig. 436; 743, (41114), Fig. 433. These illustrations represent a form and have the appearance of the so-called ancient ware; the latter specimen bears the impress of the grass which was produced in the baking process.

744. (40865). Fig. 435. Cooking pot.

The following numbers represent specimens of cooking pots of varying sizes, though generally small and of the form of No. 744, though some few present the appearance of bowls:

745-766. 745, (41115); 746, (41116); 747, (41117); 748, (41118); 749, (41119); 750, (41120); 751, (41121); 752, (41122); 753, (41123); 754, (41124); 755, (41125); 756, (41126); 757, (41127); 758, (41128); 759, (41129); 760, (41130); 761, (41131); 762, (41132); 763, (41137); 764, (41138); 765, (41140); 766, (41141).

The following belong to the *sü-mū-yēn bowls*:

767-804. 767, (41055); 768, (41056); 769, (41057); 770, (41058); 771, (41059); 772, (41060); 773, (41061); 774, (41062); 775, (41063); 776, (41064); 777, (41065); 778, (41066); 779, (41067); 780, (41068); 781, (41069); 782, (41070); 783, (41071); 784, (41072); 785, (41073); 786, (41074); 787, (41075); 788, (41076); 789, (41077); 790, (41078); 791, (41079); 792, (41080); 793, (41081); 794, (41082); 795, (41083); 796, (41084); 797, (41085); 798, (41086); 799, (41087); 800, (41088); 801, (41089); 802, (41090); 803, (41091); 804, (41092), shown in Fig. 34.

805-826. 805, (41093); 806, (41094); 807, (41095); 808, (41096); 809, (41097); 810, (41098); 811, (41099); 812, (41100); 813, (41101); 814, (41102); 815, (41103); 816, (41104); 817, (41106); 818, (41107); 819, (41108); 820, (41109); 821, (41110); 822, (41111); 823, (41112); 824, (41133); 825, (41139); 826, (41143). This is an unburnt specimen of unusual form, resembling in this respect a sugar bowl, its margin and sides undulated.

827, 828. 827, (40853), bowl-shaped with conical bottom; 828, (41053), Fig. 432, pot-shaped, but with four legs.

829, 830. 829, (41134), 830, (41135), are really pitchers, as will be seen by reference to Fig. 431, which represents the latter, but they appear to be made for cooking purposes, as they are designated by the name *sü-mū-yēn*.

LADLES.

Called by the Zuñians *sā-shō-kōn-ne*. These are of two forms, one resembling somewhat an oyster-shell, the other with a handle resembling a spoon. The forms and decorations are shown in the figures. They are of white ware usually with figures on the inner surface, and of red ware without ornamentation. They vary in size from eight inches in length and five inches across the bowl to four and a half and two and a half inches.

831-839. 831, (39884); 832, (39894), Fig. 438; 833, (40430); 834, (40431); 835, (40432), flower in the bowl; 836, (40433); 837, (40460); 838, (40461); 839, (41254). With handles.

840-841. 840, (39895); 841, (39896), figures of elks in the bowl. Without handles.

842. (39929).

843, 844. 843, (40408) scrolls; 844, (40417), Fig. 440.

845, 846. 845, (40418); 846, (40419), this has a pretty marginal band, and the figure of a slender bird in the bowl.

847-851. 847, (40420); 848, (40421); 849, (40422), Fig. 439; 450, (40423); 451, (40424), resembles Fig. 440.

852-868. 852, (40425); 853, (40427); 854, (40428); 855, (40429); 856, (40434); 857, (40435); 858, (40437); 859, (40438); 860, (40439); 861, (40441); 862, (40442); 863, (40459); 864, (40462); 865, (40463); 866, (40675); 867, (40677); 868, (40678), Fig. 441.

869, 870. 869, (40679); 870, (40875), Fig. 437.

BASKETS.

Called by the Zuñians, *āh-wēhl-wi-āh-pä-sāhl*. These vessels, which vary in size from four to eight inches in diameter and from two to five in depth, are in the form of bowls, sometimes with a handle over the top like a basket handle, sometimes without. The margin is either scalloped, as in Fig. 452, or terraced so as to resemble the section of a pyramid or pueblo, being cut in this form with a horse-hair while soft. They are always of white ware decorated with black. The margin is uniformly black, and there is often an inner and outer submarginal narrow band following the undulations or terraces. The figures most common, and in fact almost exclusively used, are those resembling tadpoles, but which, as I learned, are intended to represent a small crustacean or the larva of an insect common in the water-pools and streams of the Zuñi country; and the somewhat grotesque figures of the horned toad (*Phrynosoma*). These figures are placed both on the outer and inner surfaces, though the figure of the reptile is generally found on the outer.

These singular vessels are used by the Indians only in their sacred and ceremonial dances. In them is placed a small quantity of meal; they are then borne in the hands of the women, who, during the dance, take a small quantity of the meal, just as much as they can hold between the

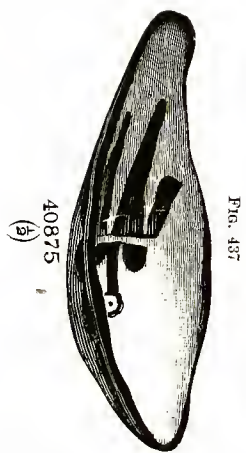


Fig. 437

40875
(3)



Fig. 439

40422
(3)

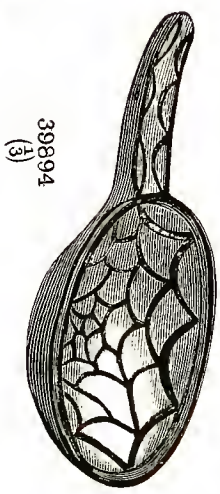


Fig. 438

39894
(3)



Fig. 440

40417
(3)

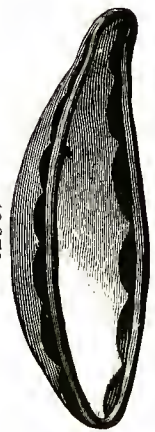
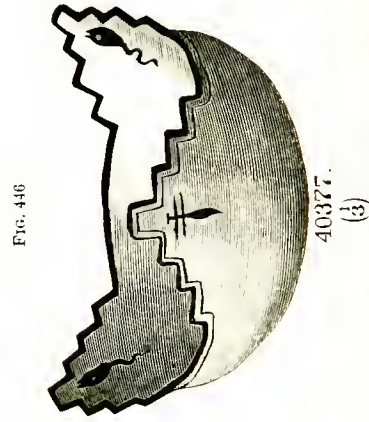
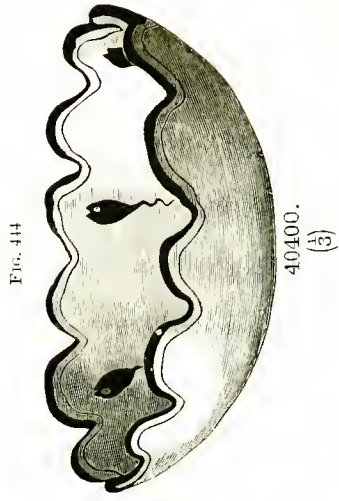
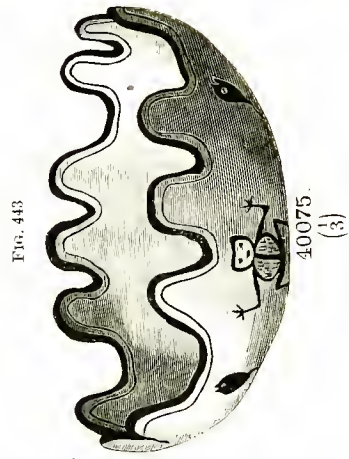
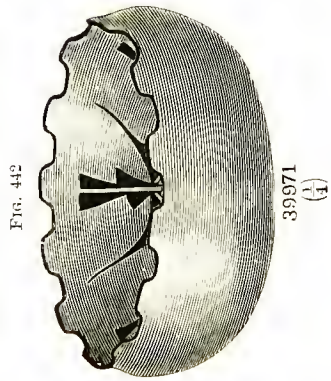


Fig. 441

40678
(3)

Figs. 437-441.—Zuni Ladles.



FIGS. 442-447.—Zuni Clay Baskets.

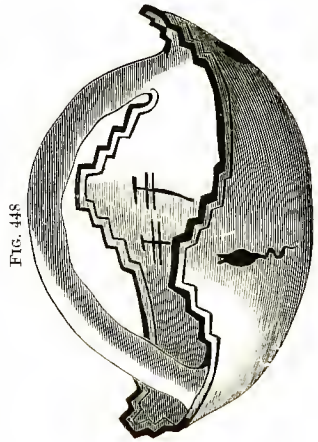


FIG. 448

40359.
($\frac{1}{3}$)



FIG. 451

40355.
($\frac{1}{3}$)

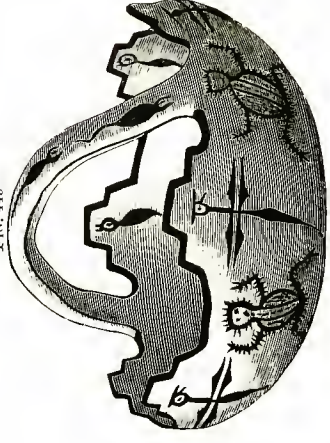


FIG. 449

41019.
($\frac{1}{3}$)



FIG. 452

40354.
($\frac{1}{3}$)

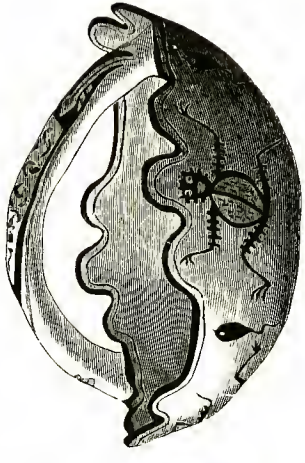


FIG. 450

40356.
($\frac{1}{3}$)



FIG. 453

40379.
($\frac{1}{3}$)

FIGS. 448-453.—Zuni Clay Baskets.

tips of the fingers, and sprinkle it on the sacred objects and on the heads of the persons leading in the ceremonies.

As the forms and decorations are correctly shown in the figures, I shall only notice those which are unusual.

Without handles; margin scalloped:

871-873. 871, (40074); 872, (40075), Fig. 443; 873, (40400), Fig. 444.

Without handles; margin terraced:

874. (40337). Figures of insects on outer surface.

875-881. 875, (40344); 876, (40364); 877, (40367); 878, (40368); 879, (40369); 880, (40370); 881, (40371), Fig. 445.

882-899. 882, (40372), Fig. 447; 883, (40373); 884, (40374); 885, (40375); 886, (40376); 887, (40377), Fig. 446; 888, (40378); 889, (40380); 890, (40381); 891, (40382); 892, (40383); 893, (40384); 894, (40385); 895, (40392); 896, (40393); 897, (40394); 898, (40396); 899, (40803), this specimen, which is but slightly burnt, is more globular in form than usual, and has mounted on each pyramid a small image, one human, one of a dog or fox, one of a chicken, and the other probably intended for a bird. This is really not a meal basket, but is carried in the dance for rain, and bears the name *tkhā-pō-kā-tēhl-le*.
900-902. 900, (41014); 901, (41015), this has in the place of the reptile the figure of a bird; 902, (41018).

903. (39971). Fig. 442. A Zuñi clay basket without handles; the form of the margin and inner decorations are unusual, and on this account and the fact that the little water animal does not appear on it, it is probably from some other tribe, though obtained at Zuñi.

904. (40354) Fig. 452. With handles; margin scalloped. The decorations on this basket are unusual. The chief figure and the most interesting one on this entire group of pottery is that of a snake encircling the body of the basket, on the head of which is a feather crest.

905. (41019). Fig. 449. A Zuñi dance basket, one of the most complete in form and decoration in the collection.

906-909. 906, (40356), Fig. 450; 907, (40390); 908, (40391); 909, (40806). This is more cup-shaped than usual, and is ornamented with the geometrical figures common on bowls. It belongs to a distinct class of sacred vessels to which the name *tkhā-pō-kā-tēhl-le* is applied.

910-913. 910, (40336); 911, (40353); 912, (40355), Fig. 451; 913, (40357), varies in having the head of a bird. With handles; margins terraced.

914-922. 914, (40358); 915, (40360); 916, (40361); 917, (40362); 918, (40365); 919, (40366); 920, (40359), Fig. 448; 921, (40379), Fig. 453; 922, (40386). This and the three following specimens are small baskets called by the Zuñians *āh'-wēhl-wi-āh-pā-sāhl-tsān-nā*.

923-928. 923, (40387); 924, (40388); 925, (40389); 926, (40395). This and the two following bear the same figures as observed on Fig. 452.
927, (40397); 928, (40398).

929. (40399). This basket is ornamented with the conventional little water animal, inside and out; it also presents the head and tail of a snake, the body of which encircles the base of the basket. The head of the snake is decorated with a crest and a horn-like projection immediately before the eyes. The tongue and teeth are also represented in colors on the specimen. The rim is serrated and painted black with a small line conforming to the black band immediately under it.
930. (41016). Is without a handle, but noticeable for the representation of a bird, on each side of which are two of the little water animals.
931. (41017). Basket without handle and four pyramids with serrated edges, and representation of horned toad on sides.
932. (41019). Basket with handle, large toad on each side, and a dragon-fly on each side of the toad.

PAINT CUPS.

These are always small, but vary in size from one and a half to three inches in height. They are usually in the form of water vases or globular jars, though sometimes of a true cup shape, and occasionally cubical. They are generally single, but quite often double, and occasionally triple and quadruple. To the large-sized single ones the Zuñians apply the name of *hël-i-pō-kā-tēhl-le*; and to those of smaller sizes, *hël-i-pō-kā-tēhl-tsān-nā*. They are usually without handles, but sometimes these are present. The double ones are connected only by a bar extending from the body of one to that of the other; and the triple and quadruple ones in a similar manner. They are of red and white ware like the other pottery; the decorations on the white are similar to those already described, so far as they can be adapted to these small articles.

We shall give the numbers without remarks, except to note unusual forms and figures.

Single cups:

- 933-938. 933, (39881); 934, (39888); 935, (39938); 936, (39939); 937, (39944); 938, (39945); with figures of the little aquatic animal so frequently represented on the earthenware baskets used in rain dances.
- 939-942. 939, (39949); 940, (40056); 941, (40111); 942, (40112); square, box-shaped, of brown ware and very rude.
- 943-946. 943, (40323); 944, (40324); 945, (40325); 946, (40326); with terraced margin like that so common in baskets used in the sacred dances.
- 947-952. 947, (40327); 948, (40328); 949, (40329); 950, (40330); 951, (40331); 952, (40332). With meander band of simplest form.
- 953-961. 953, (40333), terraced margin; 954, (40334); 955, (40335); 956, (40338); 957, (40339); 958, (40340); 959, (40341), true cup with looped handles; 960, (40342); 961, (40343), with straight cylindrical handle.

- 962-968. 962, (40345); 863, (40346); 964, (40347); 965, (40348), form of the ordinary glass tumbler; 966, (40349); 967, (40352); 968, (40587). Mug-shaped, with broad, horizontal rim.
- 969-974. 969, (40588); 970, (40589); 971, (40590); 972, (40591); 973, (40592); 974, (40593). With simple meander band.
975. (40594). The artist has evidently attempted to figure on this the true meander (Greek fret), but has failed.
976. (40595). Marked with the grotesque horned toad so common on the earthenware baskets.
- 977-979. 977, (40596); 978, (40597); 979, (40598). Spherical in form, decorated with figures of the grotesque bird heretofore mentioned.
- 980-983. 980, (40599), bowl-shaped; 981, (40645); 982, (40647); 983, (40648). Bird with a scroll arising out of its back.
- 984-994. 984, (40649); 985, (40650); 986, (40651); 987, (40684); 988, (40826); 989, (40828), Fig. 455; 990, (40829); 991, (40830); 992, (39768); 993, (39982); 994, (39983).

Double cups (*hél-i-pō-kā-tēhl-i-pā-chin*). The little water animal is a common figure on these.

- 995-998. 995, (39931); 996, (39932), Fig. 454; 997, (39948); 998, (40350). This has the connecting bar arched so as to form a handle.
- 999-1004. 999, (40351); 1000, (40433); 1001, (40444); 1002, (40445); 1003, (40447); 1004, (40349). The last five are plain.
- 1005-1007. 1005, (40448); 1006, (40449); 1007, (40450). With scalloped margin, double bars, the upper one arched; grotesque figures of horned toad.
- 1008-1017. 1008, (40451); 1009, (40452); 1010, (40454); 1011, (40455); 1012, (40456); 1013, (40457); 1014, (40610), double bar or bar and handle; 1015, (40681), Fig. 456; 1016, (40682); 1017, (40854), square, without bar.

Triple cups :

- 1018-1023. 1018, (40605); 1019, (40606); 1020, (40609); 1021, (40680); 1022, (40693); 1023, (40856).

Quadruple cups, to which is applied the same Zuñi name as that given to those provided with triple and quadruple cups.

1024, 1025. 1024, (40612), Fig. 457; 1025, (40613). Brown, square, united directly at the sides without bars.

- 1026-1029. 1026, (40652); 1027, (40855); 1028, (40856), square; 1029, (40859), square.

CONDIMENT CUPS.

These are similar in form and decorations to the paint cups, and are also round and square, single, double, and quadruple. They are usually small, holding from less than half a pint to a pint. The different names applied to them will be given as they are reached in the list. The

double and quadruple ones are connected together in the same manner as the multiple paint-pots,

Single cups:

1030. (39878). Square with figures of chickens on the sides.

Mā-pō-kā-tēhl-le is the name by which the round or vase-shaped vessels are designated. They are numbered as follows:

1031. (39905). Fig. 459. The figures on this specimen appear to be intended as representations of some neuropterous insect, but possibly they represent birds.

1032-1037. 1032, (40653); 1033, (40654); 1034, (40655); 1035, (40656); 1036, (40657); 1037, (40658). Some of these appear, from the fragments of bars attached to them, to have belonged to double specimens.

1038, 1039. 1038, (40633); 1039, (40832). These two are red ware.

1040-1049. 1040, (40833); 1041, (40834); 1042, (40835); 1043, (41006); 1044, (41007); 1045, (41008), Fig. 458; 1046, (41170); 1047, (40603); 1048, (40606); and 1049, (40664), are square.

Double cups:

The round form has the same name as the single salt cup, but the square pattern is named *Mā-pō-kā-thlē-lō-ne*. The following specimens belong to the latter class:

1050-1057. 1050, (39900); 1051, (39901); 1052, (40416); 1053, (40604); 1054, (40662); brown 1055, (40683); 1056, (40831); 1057, (40661).

1058-1068. The following are round: 1058, (40410); 1059, (40411); 1060, (40412); 1061, (40413); 1062, (40414); 1063, (40415); 1064, (40440); 1065, (40659); 1066, (40660); 1067, (40666); 1068, (40667).

1069. (40836). Quadruple. This and the last three preceding specimens are ornamented like Fig. 458.

EFFIGIES.

These figures, which are of small size, the largest not exceeding one foot in length, are quite rude, rendering it difficult in some cases to tell what animal is intended, the only exceptions to this rule being some figures of owls, in which the Zuñians appear to have made the nearest approach to the true form. They are generally of white ware, decorated with colors. Often these decorations are arbitrary, but as a general rule there has been an evident attempt to imitate nature so far as it could be done with the various shades of brown and black.

Some of the larger pieces, especially the owls, have an opening at the top or on the back, as though designed for water vessels.

The objects most commonly represented are owls (which largely predominate), antelope, elk, ducks, and chickens. The human form, the pig, sheep, horse, &c., are occasionally represented.

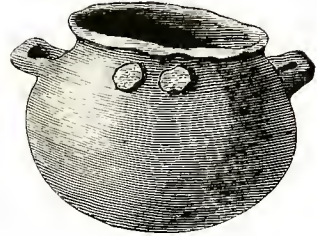
Owls, *mū-hū-que* and *mū-hū-que-tsān-nā*. These are nearly always represented with feet, and in most cases with legs. The body is usually disproportionately large, as are also the legs; the bill is small, and the

FIG. 454



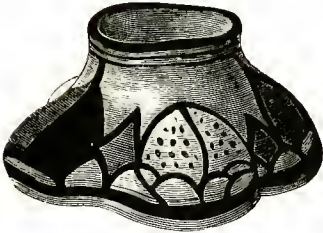
39932
($\frac{1}{3}$)

FIG. 455



40828
($\frac{1}{2}$)

FIG. 456



40681
($\frac{1}{2}$)

FIG. 457



40612
($\frac{1}{2}$)

FIG. 458



41008
($\frac{1}{3}$)

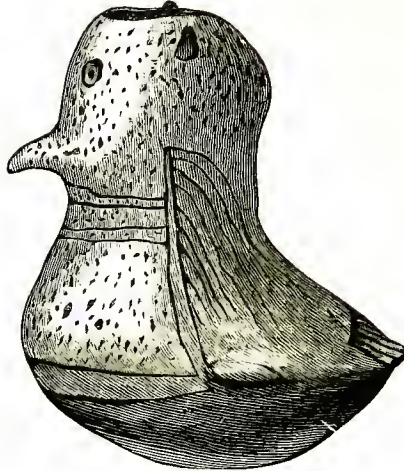
FIG. 459



39905
($\frac{1}{3}$)

FIGS. 454-459.—Zuni Paint and Condiment Cups.

FIG. 460



40059
(3)

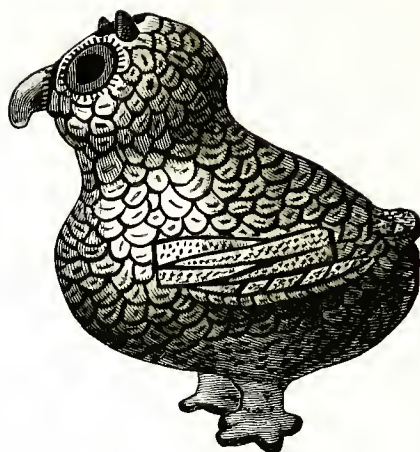
FIG. 461



40140
(3)

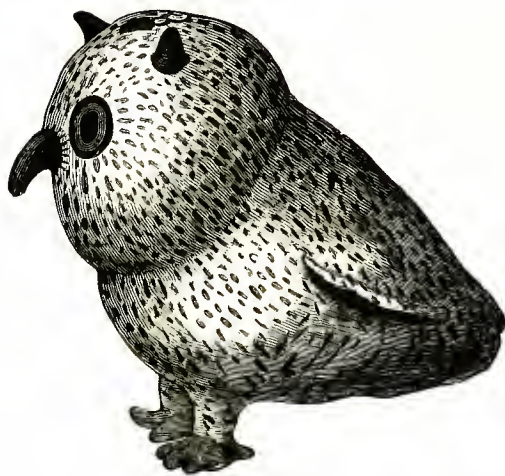
FIGS. 460, 461.—Zuni Effigies.

FIG. 462



40740
($\frac{1}{1}$)

FIG. 463



40738
($\frac{1}{1}$)

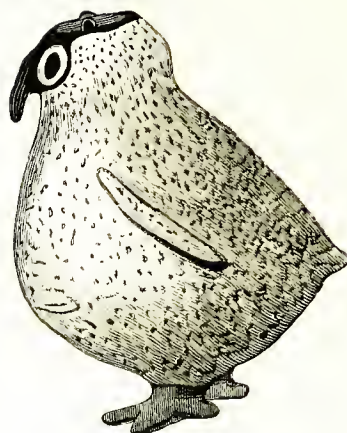
FIGS. 462, 463.—Zuñi Effigies.

FIG. 464



40739
($\frac{1}{4}$)

FIG. 465



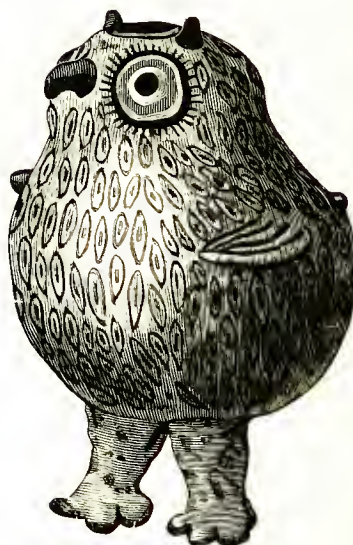
40066
($\frac{1}{3}$)

FIG. 466



40713
($\frac{1}{3}$)

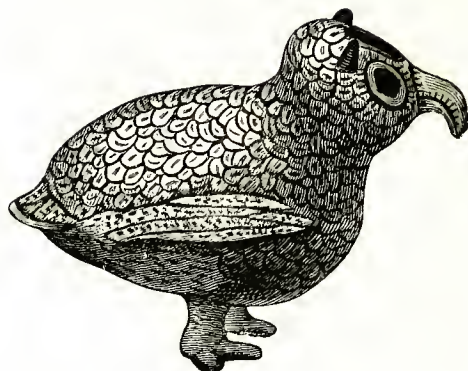
FIG. 467



40754
($\frac{1}{2}$)

FIGS. 464-467.—Zuni Effigies.

FIG. 468



40748
($\frac{1}{4}$)

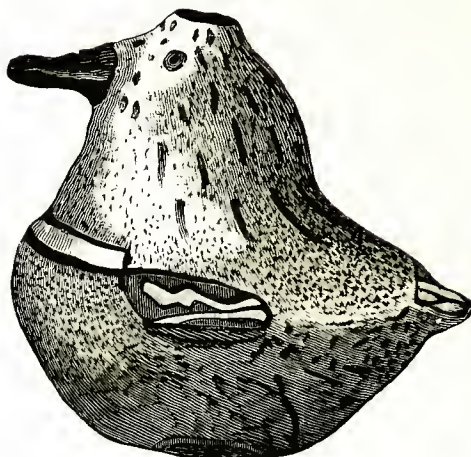
FIG. 469



40767
($\frac{2}{2}$)

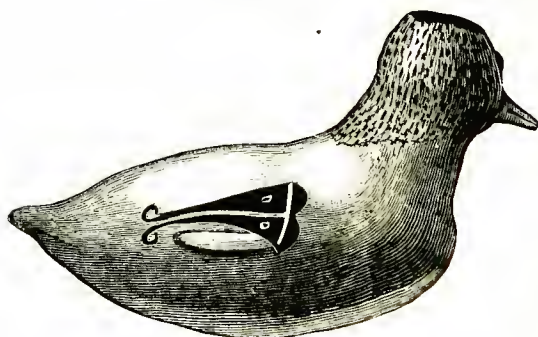
FIGS. 468, 469.—Zuni Effigies.

FIG. 470



41026
(3)

FIG. 471



39910
(3)

FIGS. 470, 471.—Zuni Effigies.

wings are represented by small lateral projections; the tail is short. The eyes are generally well represented. The feathers, as will be seen by reference to the figures, are quite well shown. The figures have an opening on the top of the head.

As there is a strong similarity in form, and the mode of decorating them is shown in the figures, no special remarks on the different specimens are necessary.

1070-1077. 1070, (39875); 1071, (39876); 1072, (39877); 1073, (39921); 1074, (39942); 1075, (39957); 1076, (40054); 1077, (40059), shown in Fig. 460; this is one of the very few without feet.

1078-1096. 1078, (40064); 1079, (40065); 1080, (40068); 1081, (40138); 1082, (40140), Fig. 461; 1083, (40261); 1084, (40142), small; 1085, (40262); 1086, (40141); 1087, (40142); 1088, (40409); 1089, (40734); 1090, (40735), without feet; 1091, (40736); 1092, (40737); 1093, (40738), Fig. 463, very large; 1094, (40740), Fig. 462; 1095, (40741); 1096, (40742).

1097-1112. 1097, (40743), Fig. 466; 1098, (40744); 1099, (40745); 1100, (40746), without feet; 1101, (40747); 1102, (40748), Fig. 468; 1103, (40749); 1104, (40750); 1105, (40751); 1106, (40752); 1107, (40753); 1108, (40754), Fig. 467; 1109, (40755); 1110, (40756); 1111, (40757); 1112, (40758), without decorations.

1113-1120. 1113, (40759); 1114, (40760); 1115, (40761); 1116, (40762); 1117, (40763); 1118, (40764); 1119, (40765); 1120, (40766), bearing a single young owl on its back.

1121. (40767). Shown in Fig. 469, bearing three young owls on its back.

1122. (41043).

1123, 1124. 1123, (40066), Fig. 465, and 1124, (40739), Fig. 464. Two owl-shaped water vessels from Zuñi.

Duck-shaped canteens, *ē-yāh-mē-hē-to*, are usually represented in a swimming posture, without feet, though occasionally the standing posture is adopted. The feather decorations are not so generally used as on the owls; several specimens bear on the back or sides the figure of the grotesque bird with spread wings. These specimens, like the owl images, have an orifice on the top of the head as though intended for water vessels, but are seldom used as such at the present time.

1125. (39910). Shown in Fig. 471.

The following are similar:

1126, 1127. 1126, (39879); 1127, (39889).

1128. (36911). With feet, in standing posture.

1129. (40063). With wings, without feet.

1130. (41023). This and the three following specimens have feather decorations and are small. *Ē-yāh-mē-hē-tō-tsān-nā* of the Zuñians.

1131-1133. 1131, (41024); 1132, (41025); 1133, (41027).

1134. (41026), Fig. 470.

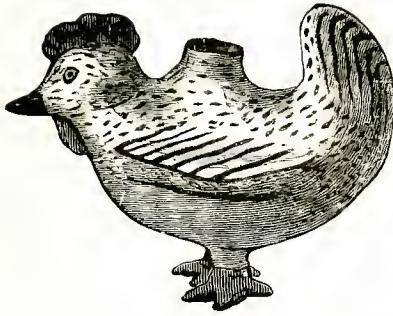
Chickens. The cock, *tō-kōk-ke*; the hen, *tō-kōk-kā*. The general term applied to the young, without reference to sex, is *sā-pi-pe*.

1135. (39919). Represented in Fig. 472.
 1136, 1137. 1136, (41028); 1137, (41029).
 1138. (41030). Shown in Fig. 476.
 1139, 1140. 1139, (41031); 1140, (41032).
 1141, 1142. 1141, (41033); 1142, (41034).
 1143-1147. 1143, (41035); 1144, (41036); 1145, (41037), Fig. 475; 1146, (41038); 1147, (41039).
 1148-1151. 1148, (41040); 1149, (41041), Fig. 474; 1150, (41042); 1151, (41216), this piece represents a hen with three young chickens on her back, as in Fig. 473.
 1152-1155. 1152, (39897); 1153, (41044); 1154, (41045); 1155, (41046), Fig. 477. Antelope. (*māh-ā-wi*.) The form and decorations are shown in Figs. 477 and 478.
 1156-1161. 1156, (41047); 1157, (41048); 1158, (41050), Fig. 478; 1159, (41215); 1160, (41210); 1161, (41211).
 1162. (41049). Elk, *shō-hi-ta*.
 1163-1166. 1163, (41212), Fig. 480; 1164, (41213); 1165, (41214); 1166, (41217). Pigs, *pits-ō-te*. The figures show the forms and decorations with sufficient accuracy to make further description unnecessary.
 1167. (41218). Ox, *wē-ā-si*. But a single example in the collection. Shown in Fig. 429.
 1168-1170. 1168, (41219); 1169, (41220); 1170, (41221). Sheep, *Kān-ē-lū*. These, like the pigs, are usually marked with spots. One specimen has these spots in the form of an S, or sigmoid figure.
 1171. (41222). The Big Horn (*Ovis montana*), *Hū-li-tkū*. This is the only specimen obtained and is a very rude figure, not easily recognizable.
 1172. (41224). The Lynx. *Tē-pi*. Orifice in the top of the head. Decorated with spots.
 1173. (41225). The Horse. *Tūsch*. Decorations, spots, and lines representing hair. A very poor figure; without the name would be unrecognizable.
 1174. (41226). Man on horseback. *I-māl-tō-yi*. The figure of the man is evidently intended to represent a Mexican, as shown by the ordinary hat and clothing. The saddle is represented, but there is no bridle or other trappings.

STATUETTES.

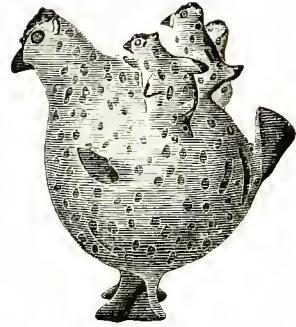
1175. (40071). Indian boy without clothing and wearing moccasins.
 1176. (40076). *Wi-hā*. Baby.
 1177. (40860). *Klem-chi-ka*. Man with hat and clothing.
 1178. (40861). Nude female figure.
 1179. (40862). Man with hat and clothing.
 1180. (40863). Nude female figure.

FIG. 472



39919
(3)

FIG. 473



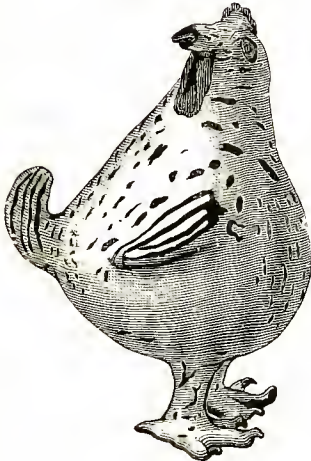
11216
(1/5)

FIG. 474



41041
(1/3)

FIG. 475



41097
(1/2)

FIG. 476



41030
(3)

FIGS. 472-476.—Zuni Effigies.

FIG. 477



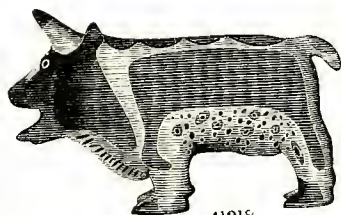
41046
($\frac{1}{5}$)

FIG. 478



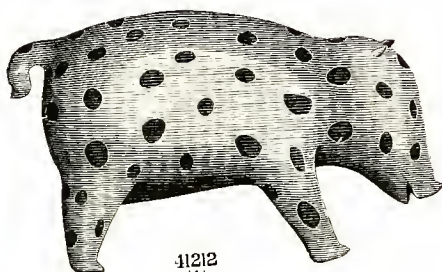
41050
($\frac{1}{3}$)

FIG. 479



41218
($\frac{1}{5}$)

FIG. 480



41212
($\frac{1}{5}$)

FIGS. 477-480.—Zuni Effigies.

FIG. 481



39927
($\frac{1}{3}$)

FIG. 482



40061
($\frac{1}{3}$)

FIG. 483



40631
($\frac{1}{2}$)

FIGS. 481-483.—Zuni Clay Moccasins.

1181. (41223). Human hand, *ah-sin-ne*. Represents the hand and wrist. Rather good figure. The wrist is surrounded by a colored scalloped band, as a bracelet.

Moccasins. *Mō-quā-we*. These are usually very correct in form, the differences between the right and left being always properly represented. Sometimes they are made singly, but usually in pairs, united directly or by a little straight bar or curved handle at the posterior end. White with color decorations, or brown or lead-colored without decorations, diminutive in size. The following specimens are without decorations:

- 1182-1190. 1182, (39924),; 1183, (39925); 1184, (39946); 1185, (39947); 1186, (40055); 1187, (40626); 1188, (40629); 1189, (40634); 1190, (40635). The last two have loops at the heel and were used as paint cups.

Decorated with colors:

1191. (40637). Pair still united.
 1192. (39927). Shown in Fig. 481.
 1193. (40060). With lines; handle at the heel.
 1194, 1195. 1194, (40061), Fig. 482; 1195, (40628), decorated with grotesque bird.
 1196. (40630). With same figure.
 1197. (40631). Represented in Fig. 483.
 1198. (40633). This pretty pair is profusely ornamented with serrate lines from the tip to the ankles.
 1199, 1200. 1199, (40634) and 1200, (40636). Single, decorations, same as in the preceding; probably belong to one pair, as part of the connecting band remains on them.
 1201. (40804). Auomalous. *Tkhü-pō-kā-tēhl-le*. In the form of a low or depressed vase, with two handles, decorated with scroll figures; margin straight.
 1202. (40805). Vase-shaped, with single handle; a scalloped and an undulate band around the body. Margin straight.
 1203. (42375). Toy house. Composed of clay and willow sticks. Made by children.

CLAYS AND PIGMENTS.

The following specimens are employed in the manufacture of pottery and for decorative purposes:

- 1204, 1205. 1204, (41230) and 1205, (41231). Are specimens of a whitish clay or kaolin, of which a solution is made and applied to the outer surfaces of earthenware. This whiting in a coarser state is used for white-washing their chimneys and rooms.
 1206. (41265). Is a dark carbonaceous clay which the Zuñi Indians obtain from near the summit of a mesa on which stand the ruins of their ancient village—or, at least, where they claim to have resided during the Spanish invasion of their country. As this clay is one of the

principal elements in the manufacture of Zuñi pottery, a quantity of it was procured and numbered as one of the specimens of the collection.

- 1207. (41901). Small nodules of azurite used by the Indians in decorating their altars, &c.
- 1208. (41902). White clay or kaolin, same as Nos. 1204 and 1205.
- 1209. (41903). Finer quality of white clay.
- 1210, 1211. 1210, (41904) and 1211, (41905). Are specimens of the above of a coarser quality.
- 1212. (41906). *Tierra amarilla*, or yellow micaceous clay, of which the Rio Grande Indians make many varieties of vessels.
- 1213. (42342). A yellowish sandy clay, which is used as one of the coloring pigments in decorating pottery. This clay burns to a reddish hue and gives to the pottery those lines of a brick-red color.
- 1214. (42343). Very dark colored ore, resembling magnetic iron ore; this stone is reduced in a small mortar, and a paint made of it for decorating their ware black, which result is obtained by baking.

VEGETAL SUBSTANCES.

BASKETRY.

- 1215. (40108). A globular-shaped water basket, with a small neck, about two inches long and three in diameter.
- 1216. (40109). Double-lobed, canteen-shaped water basket, with both outer and inner surfaces coated with gum. The neck is about the size of that of the preceding basket. The centre is compressed to about the size of the neck; the bottom flat.
- 1217. (40110). Similar to the preceding.
- 1218. (40115). This specimen is a good representation of the basketry manufactured by the Zuñians, used for carrying peaches. It is well shown in Fig. 484.
- 1219-1235. 1219, (40116); 1220, (40117); 1221, (40118); 1222, (40119); 1223, (40120); 1224, (40121); 1225, (40122); 1226, (40123); 1227, (40124); 1228, (40125); 1229, (40126), Fig. 488; 1230, (40127); 1231, (40128); 1232, (40129); 1233, (40130); 1234, (40131); 1235, (40132), are Zuñi baskets of the same character, of coarse willow ware. Sizes and shapes somewhat similar.
- 1236. (40133). This specimen is an illustration of one form quite common. We found them in general use for bringing ripe peaches from the field. Fig. 484 shows very clearly the manner of weaving them.
- 1237-1240. 1237, (40134); 1238, (41135); 1239, (41136); 1240, (41137), are all samples of the same basketry. These baskets are called by the Zuñians *hu-chi-pón-nē*.

1241. (40143). A small platter-shaped corn basket of the same coarse structure. They are called *tsi-i-lē*.
- 1242-1247. 1242, (40144); 1243, (40145); 1244, (40146); 1245, (40147); 1246, (40148); and 1247, (40149) are similar examples of corn baskets.
- 1248-1257. 1248, (40401); 1249, (40402); 1250, (40403); 1251, (40404); 1252, (40405); 1253, (40406); 1254, (40407); 1255, (40478); 1256, (40479); and 1257, (40480) are a variety of examples of the corn basket or *hu-chi-pōn-ne*.
1258. (40881). Toy basket of Navajo manufacture, of closely-woven fibre, about three inches in diameter. A string is attached to it for wearing it on the breast as an ornament, called *hō-in-hlān-tsān-nā*.
- 1259, 1260. 1259, (40882), and 1260, (40883). Small cup or rather saucer-shaped baskets similar in construction to the preceding two numbers.
1261. (40884). Is a corn basket of the same manufacture as the preceding, of much larger size, and called *hō-in-hlān-nā*.
- 1262-1264. 1262, (40917); 1263, (40918); 1264, (40919) *Tsi'-i-lē*; large-sized, coarsely woven, tray-like baskets.
1265. (40920). Toy basket; coarse, *tsi-i-lā-tsān-nā*.
- 1266-1268. 1266, (40921); 1267, (40922); 1268, (40923). Navajo water baskets, jug-shaped, *kō-sē-tōm-mē*.
1269. (41208). Large flaring or bowl-shaped basket of Apache manufacture; water-tight; used for holding flour and meal; very compactly woven; called by the Zuñis *hō-in*.
1270. (41209). Very large specimen of the same ware woven with different colored fibres, so as to present a decorated inner surface.
1271. (41227). *Tklā-līm-ne* or basket with abrupt sides. Navajo manufacture.
- 1272-1275. 1272, (41228), Fig. 485; 1273, (41229); 1274, (41230); and 1275, (41231) are examples of the coarsely-woven flat basketry used frequently for winnowing small grain. The illustration shows the details sufficiently without further description.
1276. (41248). Basket tray for bread, of the closely-woven class, called *mi-tū-lī-hō-in*.
1277. (41256). Toy basket, *tsi-lī-tsān-nā*.

PADS.

The following are ring-shaped pads made of yucca leaves interwoven in such a manner as to leave the centre open sufficiently to fit the top of the head. These pads are used in carrying water, by placing the pad on the head into which the base of the vase fits. They are used also to hold water jars and vases on the ground, thus protecting the bottom of the vessels from wearing away. They are called in Zuñi *hā-kin-ne*.

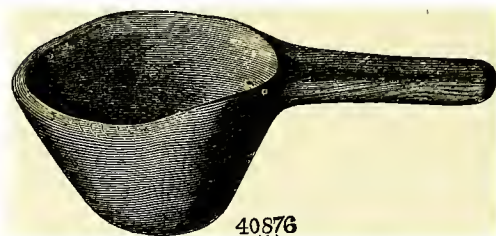
1278-1287. 1278, (40464); 1279, (40465); 1280, (40466); 1281, (40467), 1282, (40468); 1283, (40469); 1284, (40470); 1285, (40471); 1286, (40472) are examples of this pad, of which Fig. 486, 1287, (40473), is an illustration.

The following are objects of the same kind:

1288-1292. 1288, (40474); 1289, (40475); 1290, (40924); 1291, (40925); 1292, (40926).

DOMESTIC IMPLEMENTS, TOYS, &c.

In the collection are a number of wooden spoons or ladles of various sizes. These utensils were not frequently met with. The readiness with



40876
($\frac{1}{4}$)

FIG. 490.

which the Indians can make pottery or earthen ladles, a large number of which are in the collection, has caused these to supersede the former. The wooden spoons are always chiseled from a single piece of wood. See Fig. 490.

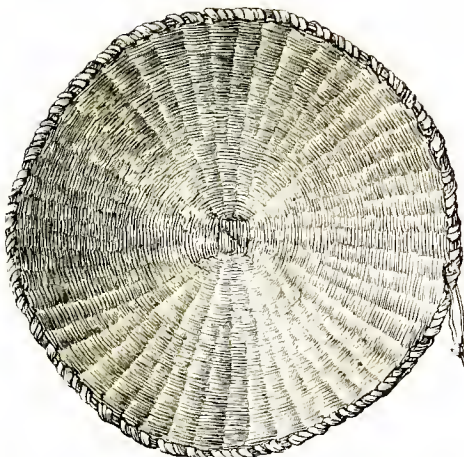
- 1293-1297. 1293, (40876); 1294, (40877); 1295, (40878); 1296, (41020); 1297, (41022) are specimens of spoons and ladles of wood. The large ones are called *täm-shö-kön-nā-tsān* the smaller, *täm-shö-kön tsān nā*.
1298. (41276). A wooden chair, made entirely of wood and in imitation of a common chair, ornamented with carvings.
1299. (42292). Meat-block in the form of a stool, one side of which is used for chopping, the other to sit upon.
1300. (40827). Rotary drill, with stone disk and flint point, usually employed in perforating turquoise and other hard substances for ornaments. See Figure 494. Called by the Zuñis *klā-tò-ne*.
1301. (40809). A small rectangular wooden box with a lid, used as a treasure-box, for holding choice trinkets and ornaments such as feathers, &c., called *la-pö-ka kle-tön-tsān-nā*.
1302. (41279). Wooden gun rack, made of pieces of flat wood, of a rectangular form, with notches in the upright sides for holding guns and bows. It is common in Zuñi.
1303. (41192). A wooden comb used in connection with the loom. It is provided with teeth about one inch long; these teeth are placed between the perpendicular threads and with the hand brought down firmly on the cross-threads or yarn until it is perfectly compact. The blankets woven in this manner are water-tight. This comb is called *o hū-nā-pā-ne*.
- 1304-1307. 1304, (42043); 1305, (42044); 1306, (42045); and 1307, (42046); are combs above described, used with looms.
1308. (40810). A wooden comb of the same character.

FIG. 484



40133
($\frac{1}{4}$)

FIG. 485



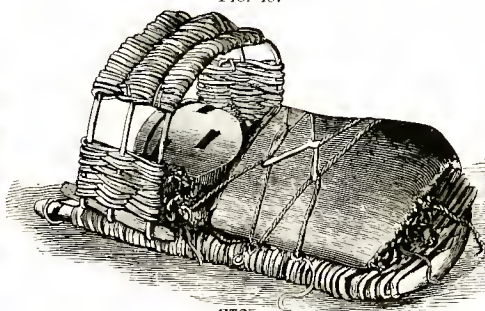
41228
($\frac{1}{4}$)

FIG. 486



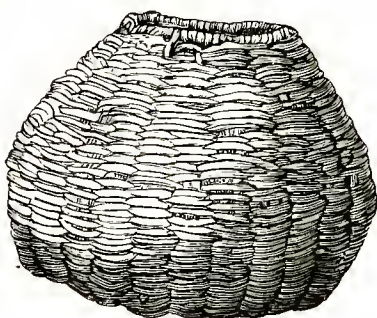
40473
($\frac{1}{3}$)

FIG. 487



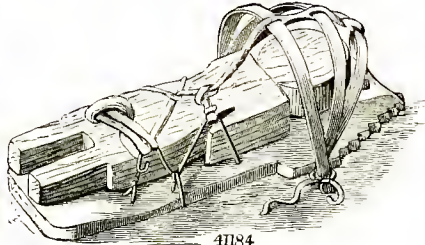
41725
 $\frac{1}{4}$

FIG. 488



40126
($\frac{1}{2}$)

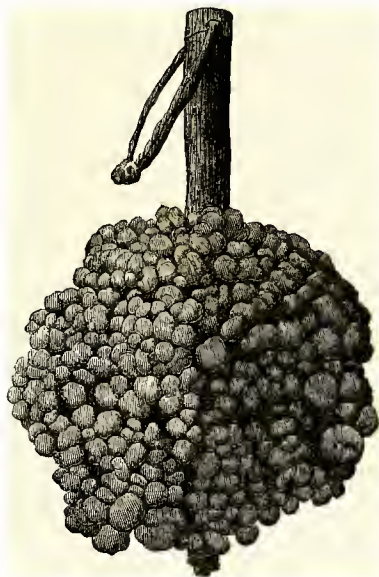
FIG. 489



41134
 $\frac{1}{2}$

FIGS. 484-489.—Zuni Basketry, and Toy Cradles.

1309. (41700). Bundle of fine grass stems for a comb.
1310. (41282). Comb and brush combined, made from dried grass stems; one end is used as a comb, the other as a brush.
1311. (41277). Wooden spade or shovel quite like an ordinary spade, used by the Indians for shoveling snow from the roofs of their houses, and for taking bread from their bakeovens. See Fig. 495.
1312. (40879). Wooden digger and corn-planter, called *tā-sā-quin-ne*. This is the only specimen of the kind in the collection. The foot is used in digging as we use a spade. In making holes in the ground for planting grain, one foot is placed on the short projection, and the individual using it walks along, each alternate step making a hole in the ground into which to drop the grain. See Fig. 496.
1313. (41262). Medicine sticks to influence rain. These little sticks are found hidden beneath the rafters of nearly every house in Zuñi.
1314. (41275). Wooden war-club, which the Zuñis claim was one of their original weapons of war. See Fig. 491.
1315. (41856). A peculiar warty squash or gourd hollowed out and filled with pebbles to make a rattling sound, used in most of the dances. See Fig. 497.
1316. (41281). Gourd dance rattle.
1317. (41196). Squash or gourd for making rattles.
1318. (41197). Smooth-surfaced squash for rattle.
1319. (41189). Gourd painted red, yellow, and black, which is suspended to a pole held in the dance called by the Zuñis *tōm-tschūl-tōn-ne*.
1320. (41190). Yellow gourd, with black band, and having alternate squares of white and black around the centre, through which a stick is passed for holding it in the hand during a dance. The gourd is placed on the stick in an inverted position. On the top of the stick a bunch of feathers is attached. This ornament is generally used in their social dances, in which the young men and women mingle. See Fig. 492.
1321. (41193). Water gourds.
1322. (41194). Gourd with opening in the end of the handle.



41856
(3)
FIG. 497.

- 1323-1334. 1323, (41198); 1324, (41199); 1325, (41200); 1326, (41201); 1327, (41202); 1328, (41203); 1329, (41204); 1330, (41205); 1331, (41206); 1332, (41207); 1333, (41234); 1334, (41235), are wooden birds carved and painted to represent such as they are accustomed to seeing daily. Those represented are the magpie, prairie lark, oriole, humming bird, and swallow. The latter is shown in Fig. 493. The object is attached to a stick in such a manner that the wings can be made to move up and down by pulling a string, in imitation of the bird in flight.
1335. (41184). Toy or baby cradle, called *wi-hā-klem-tsān-nā*, (see Fig. 489), with a wooden doll arranged to show the manner of securing children in cradles.
1336. (41275). Cradle with wooden doll, Fig. 487, composed of woven willows.
1337. (41724). Toy drum, *tō'-sō-ān-ān-tōm-me*.
1338. (41285). Spinning top.

FOODS.

1339. (40905). *Wia-vi*, or wafer bread.
1340. (41261). Meal from Indian maize.
1341. (41263). Chili, or ground red pepper.
1342. (41264). Dried peaches; Indian style.
1343. (41266). Dried squash; Indian style.
1344. (41267). Indian beans.
1345. (41271). Corn parched by the Indians.
1346. (41272). Native salt of Zuñi.
1347. (41273). Zuñi bread.
1348. (41274). Zuñi bread used in the dance.
1349. (41280). Zuñi bread.
1350. (41283). Zuñi sprouted wheat, from which a juice or wine is obtained.
1351. (42050). Horse beans cultivated by the Indians.

MEDICINES AND DYES.

1352. (41172). Root used as medicine.
1353. (41173). Root used as medicine.
1354. (41175). Root used as medicine, called by the Zuñians *āh-quā-ā-we*.
1355. (41174). Bark for coloring buckskin red.
1356. (41907). Plant for coloring black.
1357. (41908). Plant used for decorating pottery black, the oil or juice of which is used.

FIG. 491



FIG. 493

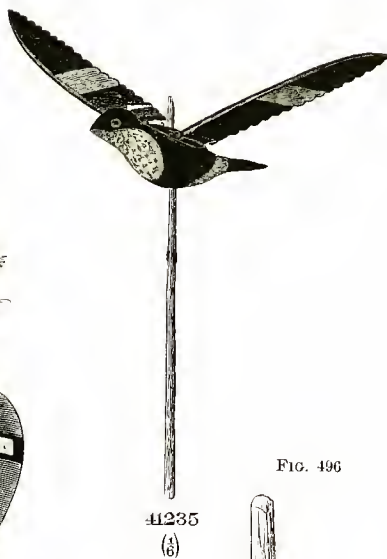


FIG. 492



FIG. 496



FIG. 494

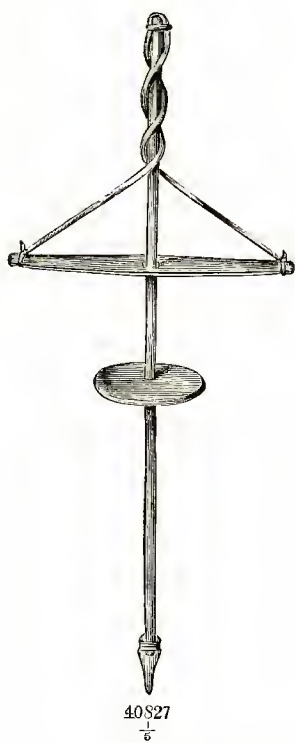


FIG. 495



FIGS. 491-496.—Zuñi War Club, Dance Ornaments, etc.



FIG. 500 (41213)

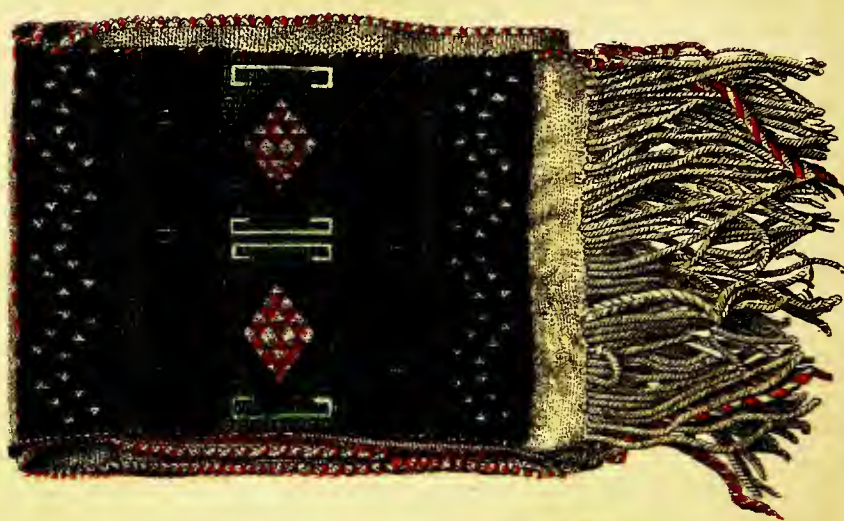


FIG. 501 (41808)



FIG. 502 (41838)

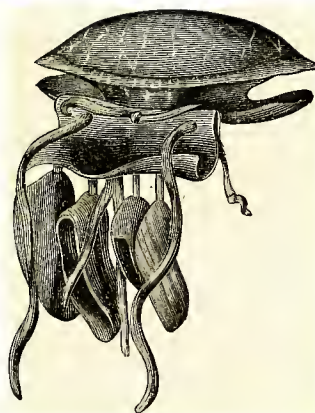
JULIUS BIER, LITH.

Figs. 500-502 - ZUNI SASHES.
1/4 NATURE.

ANIMAL SUBSTANCES.

HORN AND BONE.

1358. (41284). Bone awl, with iron shaft.
 1359-1361. 1359, (41851); 1360, (41852);
 and 1361, (41853), Fig. 498, are speci-
 mens of a rattle or musical instru-
 ment made from the shell of a turtle
 which is highly esteemed by the Pue-
 blo tribes. The flesh of the turtle is
 carefully removed from the shell,
 leaving it hollow. To the edges of
 the breast plate are attached the toes
 of goats or sheep. These toes com-
 ing in contact with the hollow shell
 produce a peculiar sound, in keeping
 with the sound caused by the gourd
 rattles used in the same ceremony.
 The rattle is fastened to the rear of
 the right leg near the knee when employed in the dances.



41853

 $\frac{3}{8}$

FIG. 498.

SKIN.

1362. (41287). Lasso or lariat of plaited leather.
 1363. (41219). Hopple strap; ends locked by small blocks
 of wood. See Fig. 499.



41219

 $\frac{1}{8}$

FIG. 499.

WOVEN FABRICS.

1364. (41251). Moki scarf, from Zuñi.
 1365. (41252). Child's shirt of calico, *ō-chū-ōtsn-nā*.
 1366. (41253). Squaw's knit leggings.
 1367, 1368. 1367, (41801) and 1368, (41807). Are sashes
 of Moki manufacture, handsomely embroidered at
 each end in colors.
 1369, 1370. 1369, (41712) and 1370 (41713). Are worsted
 woven belts for the waist, called *eh-ni-ne*. See
 Fig. 500.
 1371. (41714). Worsted garter, called *eh-ni-ne tsān-nā*.
 1372. (41801). Finely-woven white cotton with embroid-
 ered edge, of which the following are examples:
 1373-1375. 1373, (41802); 1374, (41803), and 1375, (41804).
 1376. (41805). Blue woolen scarf.
 1377. (41806). Scarf.
 1378. (41807). Sash. See Fig. 501.
 1379. (41808). Sash. See Fig. 502.

1380. (41809). Navajo blanket, used as a squaw's dress, with red border.
 1381. (41810). Similar blanket.
 1382. (41811). Navajo blanket with blue border. The following are similar to the preceding:
 1383-1388. 1383, (41812); 1384, (41813); 1385, (41814); 1386, (41815); 1387, (41816); and 1388, (41817).
 1389. (41818). Saddle-blanket, in colors.
 1390-1395. 1390, (41819); 1391, (41820); 1392, (41821); 1393, (41822); 1394, (41823); and 1395, (41824), are also saddle-blankets.
 1396. (41825). Imperfect large robe of wool.
 1397. (42223). Sample of green yarn used by the Zuñians in making belts and blankets.
 1398. (42201). War trophy, worn as shoulder belt; the band which passes over the shoulder is ornamented with arrow-points which are fastened in the plaiting. The plaited portion is made of the skin dress of a slain Navajo. So highly did the Zuñians prize this trophy that I was obliged to promise its return before I was allowed to take it away. A sketch was made of it, after which it was returned to the Indians.
 1399. (42268). A Zuñi charm, made from a piece of shell rounded and pierced near one end to receive a string.



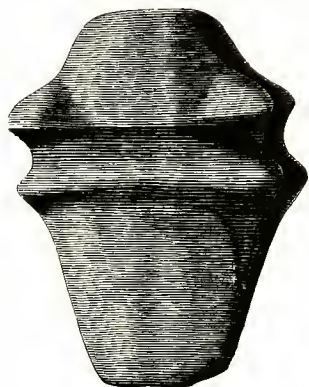
41726

(5)

FIG. 503.

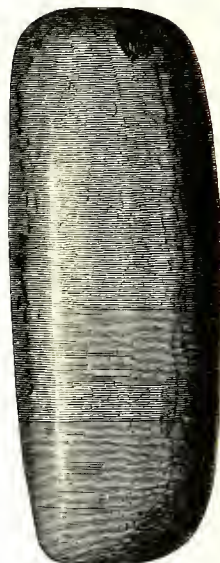
1400. (41726). Head-dress worn by maidens in dances. Fig. 503 shows the form. The flower is sometimes red and yellow; this is attached to one side of the band which goes over the head; to the other side is attached a horn-shaped ornament. The flower is called *ātē ün-ne*. The horn on the left is called *sai'änne*. The band that encircles the head is called *gēm-me*. The following are articles of the same kind, differing only in ornamentation:
 1401-1408. 1401, (41727); 1402, (41728); 1403, (41729); 1404, (41730); 1405, (41731); 1406, (41732); 1407, (41733); and 1408, (41734).
 1409. (41698). Wool rosette; part of head-dress.
 1410. (41699). Cotton rosette; part of head-dress.
 1411. (41697). Charm of wild turkey feathers.

FIG. 504



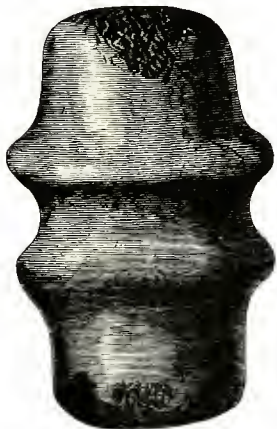
42207
($\frac{1}{3}$)

FIG. 505



42208
($\frac{1}{3}$)

FIG. 506



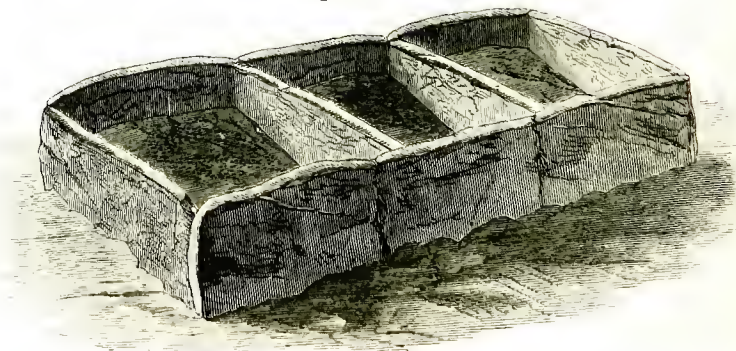
42337
($\frac{1}{3}$)

FIG. 507



42213
($\frac{1}{3}$)

FIG. 508



42311

FIGS. 504-508.—Wolpi Axes and Metate.

COLLECTIONS FROM WOLPI.

ARTICLES OF STONE.

AXES, HAMMERS, &c.

- 1412. (42206). Grooved axe of black fine-grained sandstone, about eight inches long; water-worn to its present shape, afterward grooved to render it suitable for use.
- 1413. (42207). Fig. 504. Grooved axe, of basalt. The only specimen of this particular form in the collection.
- 1414. (42208). Fig. 505. Large stone celt of coarse sandstone, light gray color. It is shaped more like a wedge than the cut indicates. It is difficult to conjecture what this implement could have been used for. The sandstone of which it is made is too soft for either splitting or hammering. As it is about ten inches long and has four flat sides it may have been a grinder, as many of those implements are not unlike it in length and appearance. Its surface is quite rough and pitted.
- 1415. (42209). Sandstone maul, grooved, surface rough.
- 1416. (42210). Triangular-shaped maul, grooved in the middle; of coarse basalt. This and similar mauls evidently at one time had handles fixed to them, but at the present day it is not uncommon to see the modern Pueblo Indians holding them in the hand to crush their grain, chili or red-pepper pods in round mortars.
- 1417. (42211). Grooved axe of basalt.
- 1418. (42212). Small grooved axe of metamorphic rock.
- 1419. (42213). Fig. 507. Water-worn boulder of quartzite, grooved around the centre.
- 1420. (42214). Basaltic maul, grooved in the middle like the preceding. Used by the Indians at the present day for pounding chili or red pepper.
- 1421. (42216). Grooved axe of greenstone, quite long, well shaped, and nicely polished.
- 1422. (42217). Grooved axe of greenstone, similar to the preceding.
- 1423. (42218). Grooved axe of sandstone; top square.
- 1424. (42219). Axe of basalt, grooved on three sides.
- 1425. (42220). Grooved axe of greenstone.
- 1426. (42221). Grooved axe of quartz.
- 1427. (42222). Grooved axe of sandstone. Groove very near the top.
- 1428. (42223). Grooved axe of greenstone, well polished.
- 1429. (42224). Grooved axe of schistose rock, much flattened, with a small second groove below the larger one.

1430. (42225). Small grooved axe of greenstone, body rather square, top quite small, with the groove very near it.
1431. (42226). Axe of basalt, grooved on three sides near its top, which is flat.
1432. (42227). Grooved on three sides.
1433. (42228). Grooved axe.
1434. (42319). Grooved axe made from a fragment of a grinder.
1435. (42320). Same as preceding.
1436. (42321). Rough chipping or stone hammer.
1437. (42322). Large grooved maul of a ferruginous substance.
1438. (42323). Large egg-shaped grooved maul of coarse sandstone.
1439. (42326). Large grooved maul of irregular shape and surface; fine-grained sandstone.
- 1440-1447. 1440, (42327); 1441, (42328); 1442, (42329); 1443, (42330); 1444, (42331); 1445, (42332); 1446, (42333); 1447, (42334), are all quite similar to the two preceding mauls, and are all of sandstone.
1448. (42335). A very large grooved maul, almost square, and weighing about fifteen pounds.
1449. (42336). Grooved maul of very coarse-grained sandstone; short and thick.
1450. (42337). Fig. 506. Grooved maul of compact sandstone. The body of the maul is almost round, though the cut makes it appear flat. Several such specimens were collected, and in all instances they show that they have been better preserved than the axes. This is probably due to the fact that their shape adapts them to grinding foods and grain, and hence they are not used for splitting or cutting.
1451. (42339). Rough stone maul of sandstone, grooved in the middle.
1452. (42350). Small grooved axe of sandstone from the ruins of Pecos.
1453. (42246). Celt of a very black slate stone.
1454. (42247). Celt. This is a very fine specimen of yellow polished slate of about the same texture as the preceding one. It is about twelve inches long, and tapers gradually from the broad edge to the top.

METATES, OR GRAIN-GRINDERS, AND PESTLES.

- 1455-1460. 1455, (42279); 1456, (42287); 1457, (42289); 1458, (42309); 1459, (42310); 1460, (42311), are ordinary specimens of the metate placed together in the shape of a mill. See Fig. 508.
- 1461, 1462. 1461, (42313), and 1462, (42314), are rubbing stones.
1463. (42338). Broken metate rubber.
1464. (42249). Rubbing stone.
1465. (40139). Rude rubber of silicified wood.
1466. (42274). Small quartz rubber.
1467. (42275). Small greenstone rubber.

- 1468-1473. 1468, (42276); 1469, (42277); 1470, (42278); 1471, (42316); 1472, (42317); 1473, (42318), are all fragrants of rubbers.
1474. (42290). Round sandstone pestle, each end ovate.
1475. (42294). Square sandstone pestle.
1476. (42295). Small round pestle, with rounded ends.

MORTARS, PESTLES, ETC.

Nearly all the pestles and mortars from Wolpi present evidences of age. They are nearly all of coarse sandstone, and were used for bruising food and grain. They are usually quite large, heavy, and round. As they are generally of soft yielding rocks, the cavities are worn very deep in most of them.

1477. (42281). Large flat food mortar.
1478. (42282). Paint mortar, made from a round sandstone boulder about five inches in diameter.
1479. (42283). Grain mortar.
1480. (42284). Mortar made from a round somewhat flattened sandstone boulder.
1481. (42285). Food mortar of indurated sandstone, about four inches thick and eight inches in diameter, irregularly round, the depression being about three inches deep.
1482. (42286). Mortar for crushing grain; this is an unusually fine specimen. It is about seven inches high, and an almost round body, about an inch and a half thick at the top of the rim; the cavity is quite a perfect oval in shape, about five inches deep; bottom flat.
1483. (42288). Mortar similar to the above, but having a projection on one side like the ear of a kettle.
1484. (42291). Mortar and pestle. The mortar is nearly square; cavity about five inches deep and seven in diameter. The pestle has a groove round the middle.
1485. (42292). Paint mortar about one inch thick and nearly square.
1486. (42293). Round quartzitic boulder; one side flat, the other with a small cavity.
1487. (42307). Bowl-shaped food mortar, about ten inches in diameter and five inches high.

MISCELLANEOUS OBJECTS.

1488. (42270). Stone knife with two notches or grooves near the large end.
1489. (42271). Forty specimens of arrow-heads and small perforators, flint and agate; most of them very well shaped.
1490. (42253). Sandstone gaming ball, painted.
1491-1493. 1491, (42254); 1492, (42255); and 1493, (42256), are all sandstone gaming balls.
1494. (42257). Fig. 509. Hollow tube. The figure represents one made

from potters' clay, the other is of siliceous material. These pipes are not in use at the present time, but are frequently found around the ruins and in possession of the Indians.

- 1495. (42261). Stone image, probably intended to represent a rabbit. It is of fine-grained stone. Shown in Fig. 513. There are quite a number of these little images from Wolpi and Zuñi; as they appear to represent rabbits, it is presumed that they are quite old, and possibly antedate the introduction of domestic animals among the tribes.
- 1496. (42296). Small paint muller of jasper.
- 1497. (42297). Square quartzitic paint muller.
- 1498. (42298). Triangular paint rubber of quartz.
- 1499-1503. 1499, (42299), quartz; 1500, (42300); 1501, (42301); 1502, (42303); and 1503, (42304), are all quartz paint pestles made from half sections of small semi spherical boulders; the large end, which is flat, being used for the grinding part.
- 1504. (42305). Part of a grooved axe.
- 1505. (42306). Rubbing stone with four rubbing surfaces.
- 1506. (42262). Fig. 512. This undoubtedly represents some animal.
- 1507. (42263). Fig. 510. This evidently represents some animal other than the rabbit. The body is long and slender, and is provided with a tail.
- 1508. (42264). Small sandstone image, which is a good representation of a bear; grooved around the neck, with mouth and eyes and short tail. None of these little images are provided with anything more than short stubs for limbs.
- 1509. (42265). Very small sandstone image, quite similar to No. 1507.
- 1510. (40114). Wolpi neck ornament, Fig. 511, *hu-wat-he-qua-ve*, of red slate stone notched at each end, as shown in the cut, and perforated at the upper edge to receive a cord, with which it is suspended to the neck. Though a rare ornament, it possesses no particular known significance.

ARTICLES OF CLAY.

WATER VASES.

These are of the usual form, and for the most part of the usual size found at Zuñi; but there are also a number of very large specimens of the white ornamented, black, and red ware, having a capacity of ten or twelve gallons.

White decorated ware:

- 1511. (41356). Decorations exactly the same type as that shown in Fig. 359, except that there is a regular meander around the shoulder. The type is shown in Fig. 514.

FIG. 509

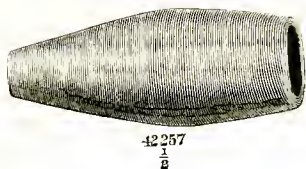


FIG. 510



FIG. 511

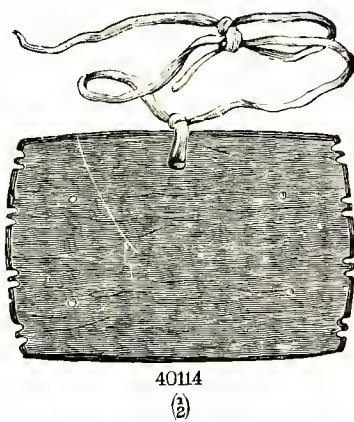


FIG. 512

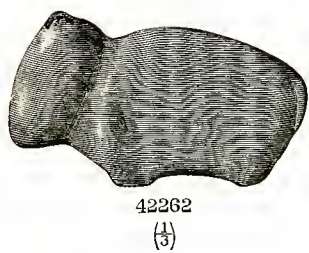
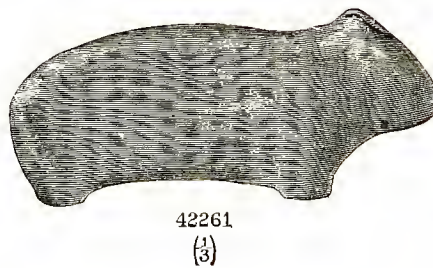


FIG. 513



FIGS. 509-513.—Wolpi Pipe, Effigies, and Ornament.

FIG. 514

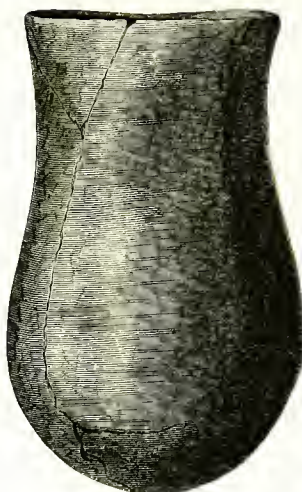


41609



FIG. 514.—Wolpi Water Vase.

FIG. 515



40646
 $\frac{1}{7}$

FIG. 516



42371
 $\frac{1}{7}$

FIGS. 515, 516.—Wolpi Cooking Pots.

The following belong to the same type as the above, the variations being but slight, the large circular space with scroll being the chief characteristic:

- 1512. (41601). Figure on the neck as on the body of Fig. 372.
- 1513. (41602). Shown in Fig. 514.
- 1514. (41603). The block containing the smaller circle is here solid and square; there is a zig-zag band around the neck as on the margins of some Zuñi bowls.
- 1515. (41604). This varies in having in place of the block with the small circle, a regularly checkered block.
- 1516. (41606). This has only the large diamond figures on the body, and a band of s's round the shoulder.
- 1517. (41607). Like No. 1514.
- 1518. (41454). With handles on sides; fringe-like band around the shoulder.
- 1519. (41455). Simple linear band around the body.
- 1520. (41456). Figures of a trident or three-pronged fork; and ladle on the body.

The following are plain brown and red ware, some of them very large. The neck is but slight, and they are often more pot-shaped than olla form. Without ornamentation.

Brown or red.

- 1521-1533. 1521, (41632); 1522, (41633); 1523, (41635); 1524, (41636); 1525, (41637); 1526, (41638); 1527, (41639); 1528, (41640); 1529, (41641); 1530, (41642); 1531, (41643); 1532, (41649); 1533, (41650).
- 1534. (41644).
- 1535. (40646). Fig. 515.
- 1536. (41647).
- 1537. (41648).
- 1538. (42374). Very large pot, used for cooking. Name, *nu-a-mash-pe*. Represented in Fig. 516.

WATER JUGS AND JARS.

These are similar to those obtained at Zuñi; sub-globular in form, one side more distinctly flattened on which to lie, the other very convex. Usually with two handles, sometimes loops, and sometimes studs or knobs. Occasionally ornamented white ware, but most generally unadorned brown or red ware. The latter showing, on some pieces, at least, a slight, perhaps accidental, glazing. They vary in size from six or seven gallons down to less than a pint.

As the various figures used in decorations have been described, only those which are unusual will be noticed here.

White decorated ware:

- 1539. (41320). Underside as usual, blown. Scalloped band in direction of mouth and handle, transverse double scalloped band across the upper half.

1540. (41362). Similar to the last.

1541. (41342). Simple bands and scrolls.

1542, 1543. 1542, (41401) and 1543, (41447). Similar.

Brown ware without ornamentation :

1544-1567. 1544, (41321); 1545, (41322); 1546, (41323); 1547, (41324), 1548, (41325); 1549, (41326); 1550, (41327); 1551, (41328); 1552 (41329); 1553, (41330); 1554, (41331); 1555, (41332); 1556, (41333); 1557, (41334); 1558, (41335); 1559, (41336); 1560, (41337); 1561, (41338); 1562, (41339); 1563, (41340); 1564, (41341); 1565, (41343); 1566, (41344); 1567, (41345).

1568-1569. 1568, (41609) and 1569, (41611). These have only the large diamond figures on the body, and a zig-zag line around the neck.

1570. (41610). The large diamonds serrate on the outer margin; neck with doubly oblique serrate lines.

1571. (41613). As in Fig. 514, except that the neck, instead of the zig-zag, has oblique diamonds.

1572. (41614). This varies from the preceding in having only a narrow scalloped band around the neck.

1573. (41620). Only the large scrolls, nothing on the neck.

1574. (41622). Similar to the preceding, except that each alternate scroll is replaced by a rosette in a circle.

1575. (41615). Like No. 1515, except that the neck has a scalloped band with birds' heads.

1576. (41618). Large diamonds on the body alternately with rosettes, by the side of which is a bird.

1577. (41621.) Similar to Fig. 514, except that the black has no circle in it.

1578. (41358). Small with a broad checkered band around the body.

1579. (41605). With narrow scalloped band around the neck; triangular figures pointing to right and left on the body with cross lines between the bases.

1580. (41608). Outline figures of terraced hills with cactus growing from them, and curved scalloped lines above.

1581. (41612). Scalloped band around the neck; oblique, heavy, double diamond figures with scrolls on the body.

1582. (41617). No decorations on the neck; body with the spear points or long triangles, and serrate oblique lines as on Zuñi bowls.

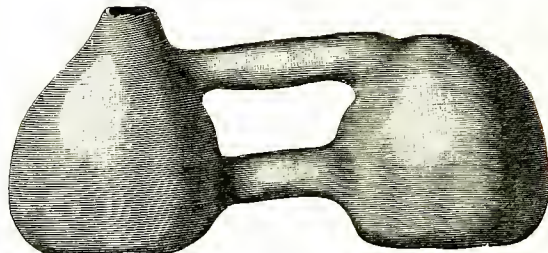
1583. (41616). Line of little circles on the neck; triangles of lines, pointing to the left on the body.

1584. (41619). Similar in form and decorations to Fig. 371 (Zuñi), except that the upper side of the band is formed of triangles instead of scrolls.

1585. (41629). This is really a double-handled jar.

1586. (41630). Scalloped band around bottom, serrated squares near rim.

FIG. 517



41364
 $\frac{1}{4}$

FIG. 518



41363
 $\frac{1}{3}$

FIG. 519



41366
 $\frac{1}{3}$

FIGS. 517-519.—Wolpi Vessels.

1587. (41631). Scrolls on the neck; birds with crest feathers, and flowers on the body.
 1588. (41634). Very small, with numerous scalloped lines arranged in diamond form.
 1589. (41644). Series of double perpendicular scallops.
 1590. (41468). Similar to No. 1586.

TOY-LIKE WATER VESSELS.

The following are very small water vessels, probably intended for children:

1591. (41449). Figures of birds on body.
 1592. (41450). The usual diamond and scroll on body.
 1593-1603. 1593, (41346); 1594, (41347); 1595, (41348); 1596, (41349); 1597, (41350); 1598, (41351); 1599, (41352); 1600, (41353); 1601, (41354); 1602, (41355); 1603, 41448).

Small toy canteens:

- 1604-1607. 1604, (41439); 1605, (41440); 1606, (41442); 1607, (41443).

The following three are cup-shaped, with an ear on each side to which to attach a string, the top is closed, with a round orifice in the middle, and they are either medicine or little paint vessels and not canteens, as given in the original field catalogue:

- 1608-1610. 1608, (41444); 1609, (41445); 1610, (41446).

Water jugs and bottles are of various forms, which will be described under their respective numbers. They are usually of the white decorated ware. The brown ware is always undecorated.

1611. (41353). See Fig. 518.
 1612. (41364). Brown ware shown in Fig. 517.
 1613. (41365). Brown ware, cylindrical, constricted in the middle and with small orifice.
 1614. (41393). Without handle.
 1615. (41366). Fig. 519. A water jar made in imitation of a common gourd cultivated by many of the Pueblo tribes. The body is ornamented on both sides with a curved line and birds, as seen in the figure. A small circular orifice is left at the base of the handle.
 1616. (41367). As in Fig. 520.
 1617. (41368). Shown in Fig. 522.
 1618-1619. 1618, (41369), and 1619, (41370). Similar to the preceding.
 1620. (41407). Regularly shaped jug with handle decorated with geometrical figures.
 1621. (41433). Brown ware, regular jug with two handles.
 1622. (41434). Similar to preceding, but without handles.
 1623. (41469). Bottle shaped. Brown ware. Represented in Fig. 521.
 The following are similar:
 1624-1628. 1624, (41373); 1625, (41374); 1626, (41375); 1627, (41376); 1630, (41377).

1629. (41393). Brown ware, with single constriction, without handle.
 1630. (41394). Similar.

CUPS.

Those obtained were chiefly very small. As will be seen, the ladle to a very large extent supplies with this people the place of the cup.

1631. (41409). Regular handled cup; white ware, with a broad band in which are white crescents.
 1632. (41461). Shaped as preceding. White ware, all except a marginal uncolored band marked with cross or checkered lines.
 1633. (41526). Small white ware, outside without decorations; scalloped marginal band inside; with handle.
 1634. (41527). Sides straight; with handle, decorated on the outside with triangular figures so common on bowls.
 1635. (41430). With similar decorations.

Toy cups. Usually brown ware without ornamentation:

1636. (41415). White ware with a band of scrolls.
 1637-1641. 1637, (41417); 1638, (41426); 1639, (41427); 1640, (41428); 1641, (41429). These five are brown ware.
 1642. (41435). A pretty pitcher-shaped vessel ornamented with interlaced or cross lines forming a regular net-work.

EATING BOWLS.

The bowls vary in size, as do those from Zūñi, but as a general rule they are small, or of but medium size; quite a number of those obtained are very small. In form they are generally like those from Zūñi, but some are biscuit-shaped, as those from Tesuke; others are true basins; and a few are square, and perhaps should not be classed as bowls, though we have included them under that general term. The decorations on the larger ones of regular form are very similar to those seen on Zūñi bowls. The colors black and red or brown are usually lighter and brighter than on the Zūñi pottery:

1643. (41357). Regular Form. Decorations on the inner face only; marginal zigzag line, with diamond and scroll below.
 1644. (41359). Outer and inner surface decorations as in Fig. 412.
 1645. (41361). Decorations only a double-scalloped inner marginal band.
 1646. (41400). Very small; a simple inner band.
 1647. (41463). Small. This and the following small specimens are decorated on the inside with what appears to be intended for an Indian head, with a tuft of hair.
 1648-1653. 1648, (41464); 1649, (41465); 1650, (41467); 1651, (41529); 1652, (41530); 1653, (41534).
 1654-1657. 1654, (41538); 1655, (41539); 1656, (41589); 1657, (41565).
 1658. (41466). No outer decorations; inner surface with the usual diamond and scroll figure.

FIG. 520



41367
 $\frac{1}{3}$

FIG. 521



41169
 $\frac{1}{3}$

FIG. 522



41368
 $\left(\frac{1}{3}\right)$

FIGS. 520-522.—Wolpi Water Jars.

1659-1660. 1659, (41528); 1660, (41531).

1661. (41540). Shown in Fig. 523.

1662-1663. 1662, (41541), and 1663, (41599), are marked only with a broad inner marginal band of geometrical figures.

1664. (41532). No outer decorations; inner with diamond and scroll and triangular figures.

The following have the outer surface decorated as in the Zuñi pattern, shown in Figs. 416 and 417. The inner decorations vary slightly.

With crenate or zigzag line on inner margin, and scroll diamond, or scrolls only:

1665-1671. 1665, (41544); 1666, (41547); 1667, (41562); 1668, (41563); 1669, (41576); 1670, (41590); 1671, (41577).

With similar marginal band and pentagonal scrolls and bird:

1672-1673. 1672, (41548), and 1673, (41549).

1674. (41550). With inner marginal band of geometrical figures; no other inner decorations.

1675. (41561). Broad marginal band only.

1676. (41574). Inside with crenate marginal band; geometrical figures below.

1677. (41584). Heavy, scalloped inner band with T-shaped spaces in the scallops. Scrolls below.

1678. (41581). Broad checkered inner band only.

1679. (41592). Similar checkered band with scroll figures below.

1680. (41596). With terraced marginal band, and terraced or pyramidal figures below.

1681. (41627). Marginal band of geometrical figures only.

1682. (41543). Biscuit-shaped. Outside with three rows or bands of large serratures.

1683. (41545). No outer decorations; inner crenate marginal line; scrolls and diamond below. The following are similar:

1684-1697. 1684, (41554); 1685, (41558), marginal band of lance points; 1686, (41564); 1687, (41567); 1688, (41569); 1689, (41573); 1690, (41575); 1691, (41578); 1692, (41579); 1693, (41582); 1694, (41585); 1695, (41588); 1696, (41591), this has also the triangular bird; 1697, (41623).

1698. (41551). No outer decorations; zigzag marginal line; flowers and lines below.

1699. (41552). This has a very pretty design on the outside, a band of diamonds, a little cross in each, and a dotted line above and below. The inner decorations of this and the following consist of a broad band only, of geometrical or architectural figures. Outer decorations various, which alone are mentioned.

1700-1701. 1700, (41553), bird in a wreath; 1701, (51555), lines of crescent.

- 1702-1703. 1702, (41556), and 1703, (41563). Same as the preceding.
 1704. (41570). Similar to the preceding, with scroll band below.
 1705. (41572). Triangular figures.
 1706. (41597). Scalloped lines arranged in large diamonds, with a flower in the center of the diamond.
 1707. (41626). Scrolls and crescents.
 1708. (41628). Same as No. 1706.
 1709. (41559). Checkered band and scrolls inside, band of crescents outside.
 1710. (41566). Inner marginal band as in outer decorations found on Zuñi bowls
 1711. (41571). No outer decorations; inner geometrical figures but no band.
 1712. (41593). Checkered band, and scrolls inside; broad marginal band with lower side scalloped.
 1713. (41594). With no outer figures; radiating simple and serrate lines inside.
 1714. (41595). No outer decorations; scalloped or crenate band, and geometrical figures on inner surface.
 1715. (41600). No outer decorations; birds and flowers or rosettes.
 1716. (41625). No outer decorations; inside with successive scallops, and the conventional bird form between squares, one above the other.
 1717-1718. 1717, (41560), and 1718, (41624). Brown ware without ornamentation.

Minute bowls, usually without decoration, but sometimes figured, especially on the outside, with simple outline figures.

- 1719-1727. 1719, (41418); 1720, (41419); 1721, (41421); 1722, (41422); 1723, (41423); 1724, (41424); 1725, (41457); 1726, (41458) 1727, (41459), with short handle; the decoration in this is true hering-bone pattern.

1728. (41460).

Square basins. These are comparatively small and resemble in shape a common knife-basket or tray, but without handle or division.

1729. (41533). Outside with figures of birds, flowers and diamonds.
 1730. (41535). Outer band with scrolls along the under edge or margin; diamond with scroll on inside.
 1731. (41537). Inside similar to No. 1730; outside usual triangular figures.
 1732. (41536). Outside similar, inside with four faces in outline.
 1733. (41542). Plain brown.
 1734. (41546). Outside the usual triangular figures; inside bird figures and slender leaf-stalks.
 1735. (41557). Outside triangular figures; inside double scroll.
 1736. (41586). Outside oblique, double serrate bands; inside broad marginal checkered band; bottom four faces.

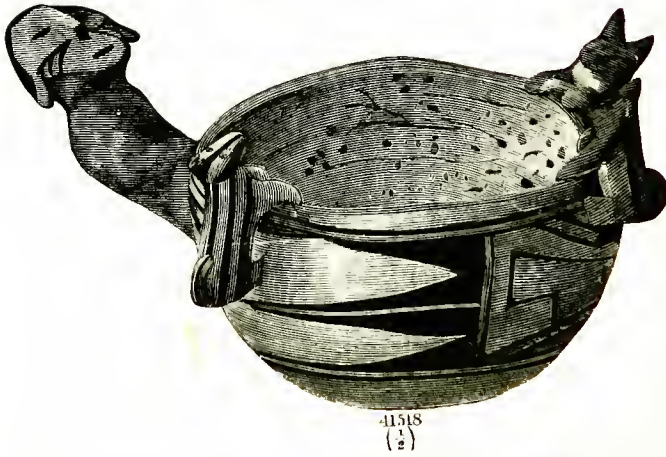
FIG. 523



FIG. 524



FIG. 525



FIGS. 523-525.—Wolpi Eating Bowl, Cooking Vessel and Ladle.

COOKING VESSELS.

These are usually unadorned and of brown or black ware. The number obtained was not large, and they vary greatly in character. They are generally of medium size or small, and some which appear to be used as cooking vessels have a handle on the side and resemble pitchers and cups. Some have two handles and are shaped like an urn or olla; others appear to be true pots. The want of uniformity among this tribe in the use of vessels of this kind renders it difficult to class them according to use. I will, therefore, group them according to form. Except one or two of the little pots none of them are ornamented.

Pot-shaped vessels:

- 1737-1739. 1737, (41360); 1738, (41379); 1739, (41385); two handles as in Fig. 524.
 1740-1741. 1740, (41380), and 1741, (41405). Without handle, the latter possibly used as a drinking vessel.
 1742-1746. 1742, (41381); 1743, (41382); 1744, (41383); 1745, (41384); 1746, (41386); each with a handle on one side; they resemble pitchers or cups.

TOY-LIKE VESSELS.

1747. (41416). Like a small water-vessel.
 1748. (41442). Olla-shaped, with handles; decorated with a band of loops around the middle.
 1749. (41451). Olla.
 1750-1751, 1750, (41452), and 1751, (41453). Cylindrical jars without handles.
 1752-1753. 1752, (41293), and 1753, (41294) Large black Cooking pots of the usual shape.
 1754. (42367). Flat jar-shaped vessel, red ware, with regular ears on the sides with holes through them. Cooking vessel; new.
 1755. (42369). Small globular red bowl, half burned.
 1756. (42370). Part of a corrugated vessel. It is yellow, but partly burned; it looks fresh and new, but is really old, having been out of the ground of old ruins near Wolpi.

LADLES.

Of these vessels, which are extensively used by the Shinumos, there are various forms with an almost endless variation in decoration, being generally of ornamented white ware. Some of them bear a strong resemblance to the skillets used on cooking stoves, the handle being looped, but the bowl is more saucer-shaped. Others, as shown in Figs. 527 and 529, are evidently fashioned after gourds. Some are somewhat of the form shown in Figs. 439 and 440, but the handle is more distinct. Others are true cup-shaped vessels, with the handles projecting from the middle of the side. A few are double with a single handle.

Skillet-shaped vessels. Usually decorated in the bowl. As these fig-

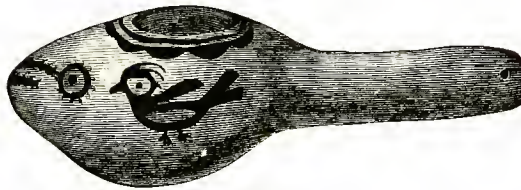
- ures are generally similar to those already described, special notice will be taken only of such forms as vary from the normal shape and figures.
- 1757-1758. 1757, (41396), and 1758, (41395). Gourd shaped; similar to those shown in Figs. 527 and 529.
- 1759-1760. 1759, (41378), and 1760, (41397). Outside covered with checkers.
1761. (41398). Outside covered with scrolls.
1762. (40408). Outside decorated with oblique serrate lines.
1763. (41411). Ladles with two bowls. Handle with the head of an animal, probably a wild-cat, at the tip; figures of birds in the bowls.
1764. (41412). Shown in Fig. 528.
1765. (41413). Handle broken; bowls with only a scalloped marginal band.
- 1766-1767. 1766, (41470); 1767, (41476). Cup-shaped, with short handles; shaped like a small olla.
1768. (41477). Handle with animal head on the tip; outside covered with checkered figures.
1769. (41479). Handle as in the preceding; oblique, doubly serrate lines on outside of bowl.
- 1770-1772. 1770, (41480); 1771, (41481); 1772, (41482); face in the bowl of the last.
- 1773-1774. 1773, (41483), and 1774, (41484); the handle of the latter represents an animal's head, with face turned toward the bowl.
- 1775-1777. 1775, (41388); 1776, (41389); 1777, (41425). The handle of this represents, in shape, the head of a woman and child, and the bowl contains the figures of two faces.
- 1778-1783. 1778, (41462); 1779, (41471); 1780, (41472); 1781, (41473); 1782, (41474); 1783, (41475). The last of these has a minute head of a woman on the end of the handle, which is solid.
- 1784-1785. 1784, (41485), and 1785, (41486). Bowls elaborately ornamented with geometrical figures and a circle of serratures, in which is a figure resembling a duck with spread wings seen from above.
- 1786-1788. 1786, (41487); 1787, (41488); 1788, (41489); the last with a woman's head on the tip of the solid handle.
- 1789-1793. 1789, (41498); 1790, (41499); 1791, (41508); 1792, (41514); 1793, (41490). The last of these as also the following seven pieces have bent, gourd-like handles, slightly curved or hooked at the end, solid and somewhat rounded.
- 1794-1800. 1794, (41491); 1795, (41492); 1796, (41493); 1797, (41494); 1798, (41496); 1799, (41497); 1800, (41500).
1801. (41495). Like No. 1788, as are also the following ten specimens:
- 1802-1811. 1802, (41502); 1803, (41504); 1804, (41505); 1805, (41507); 1806, (41515); 1807, (41518), Fig. 525; 1808, (41519); 1809, (41522); 1810, (41523); 1811, (41525).
1812. (41506). This is square; an unusual form.

FIG. 526



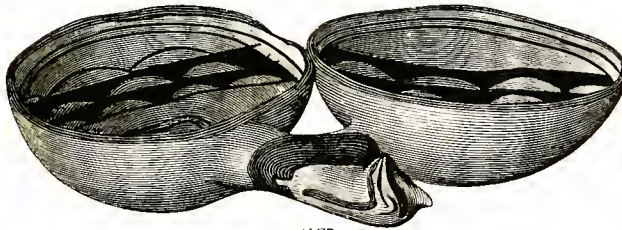
41410
 $\left(\frac{1}{2}\right)$

FIG. 527



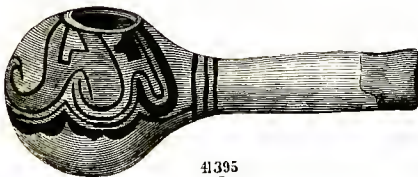
41396
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FIG. 528



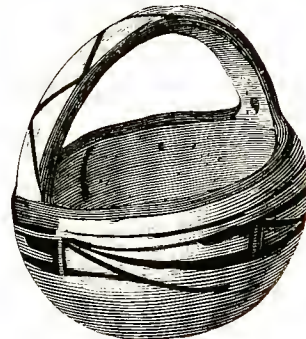
41412
 $\frac{1}{3}$

FIG. 529



41395
 $\frac{1}{3}$

FIG. 530



41392
 $\left(\frac{1}{3}\right)$

FIGS. 526-530.—Wolpi Ladles and Basket.

- 1813-1822. 1813, (41509); 1814, (41510); 1815, (41511); 1816, (41512); 1817, (41513); 1818, (41516); 1819, (41517); 1820, (41520); 1821, (41521); 1822, (41503).
- 1823-1824. 1823, (41524), and 1824, (41501). Shaped somewhat like an oyster-shell.
1825. (41399). Water vessel in the shape of a bird, with tail and wings represented.
1826. (41406). Cup with bird's head on one side, tail opposite, and slight projections to represent wings on the side. Brown ware.
1827. (41410). A double cup or ladle shown in Fig. 526.
1828. (41414). Like Fig. 531, ornamented with oblique scalloped stripes on outside; geometrical figures inside.
- 1829-1830. 1829, (41431), and 1830, (41432). Square salt-boxes; the former of white ware, with square figures on the outside; the latter brown, unornamented.
1831. (41436). Cup-shaped basket, brown ware; woman's head on top of handle.
1832. (41437). Similar basket, white ornamented ware, handle plain.
1833. (41437). Similar small, brown, cup-shaped basket.
1834. (41478). Biscuit-shaped bowl, with ornamental diamonds on outside.

MISCELLANEOUS.

1835. (41371). Basket similar to those used by the Zuñians in sacred dances, with terraced margin, plain band inside, and comb-like figures outside.
1836. (41372). Similar basket, bottom flat, and sides straighter than the preceding, decorated on the outside with oblique double serrate stripes.
- 1837-1838. 1837, (41387), and 1838, (41392). Baskets with straight margins, both with geometrical figures on the outside. The latter is shown in Fig. 530.
1839. (41390). Fig. 532, water-vase with bowl-shaped base.
1840. (41391). Fig. 531. Basin with looped handle arising from the center of the inside; ornamented white ware.

STATUETTES.

The clay images or statuettes obtained from the Shinumo pueblos are not objects of worship as supposed by many persons, but appear to be used to adorn their dwellings just as similar articles are used by civilized races. This is evident from their form and ornamentation which rudely represent the ordinary clothing worn by these Indians, and in the female figures the usual mode of wearing the hair either in a bunch at the back of the head or in two wheel-shaped knots at the sides. In a few instances ear ornaments, made of pieces of shells or beads, are found attached to the ears.

I am not aware that these images are used in their dances or religious ceremonies. If they are objects of worship it must be in the family only, or a secret worship of which I obtained no information.

Images are introduced, however, in their dances and religious rites, but these are made of wood and highly ornamented, some of which were obtained and are hereafter described.

1841. (42026). Composed of the same clays of which the general pottery is made, with small lines of a brick-red color up and down the body; black lines over the shoulder and around the body, terminating so as to represent hands; small earlets, made of blue beads, suspended from the ears; face in white, with black spots to represent mouth and eyes; horn-shaped cap, extending obliquely back from the head. Represents a male figure.
1842. (42027). Same as above, except the head, which has a square bunch at its back, representing the one method of wearing the hair by the Shinumos. Male figure.
1843. (42028). Same as No. 1841, especially in regard to the horn-shaped protrusion from the back of the head.
1844. (42029). Plain flat image, probably intended to represent a female.
1845. (42030). This image is quite characteristic of this class of objects. The cut shows all but the colors, which are the same as described above, the form only differing from No. 1841 in having two horns curving back from the head. Seen in Fig 533.
1846. (42031). Differs only from the rest in having a small hat on the head.
1847. (42032). Female figure, but with a black band around under the chin, apparently representing whiskers; dark brown body.
1848. (42033). Female figure with wheel-shaped knot on each side of the head representing the manner of wearing the hair by the Shinumo women, the body of the figure cream colored, face red, eyes and mouth black; black necklace. Special parts of the body represented in red.
1849. (42034). Male figure ornamented with red vertical lines.
1850. (42035). Fig. 534. The cut presents all the lines on the image as well as the form. The small wheels on each side of the head referred to under No. 1848 show the style of wearing the hair; the black markings shown on the cut are red on the figure. Female.
1851. (42036). Body red, marked with black and dark red lines; red and black spots on back of head to represent the hair.
- 1852-1853. 1852, (42037), 1853, (42038); dark red bodies with black and red lines.
- 1854-1856. 1854, (42039); 1855, (42040); 1856, (42041); similar to the preceding; the last with the wheel-shaped knots representing the hair.

FIG. 531



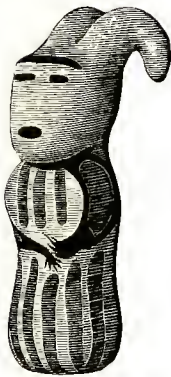
41391
 $\left(\frac{1}{3}\right)$

FIG. 532



41390
 $\frac{1}{3}$

FIG. 533



42030
 $\frac{1}{2}$

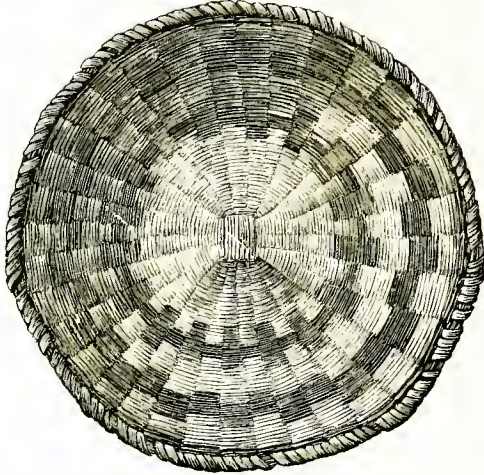
FIG. 534



42035
 $\frac{1}{2}$

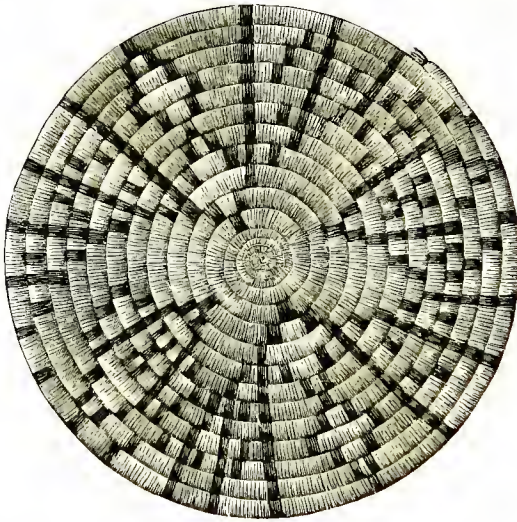
FIGS. 531-534.—Wolpi Basin, Vase, and Clay Statuettes.

FIG. 535



42085
(4)

FIG. 536



42058
(5)

FIGS. 535, 536.—Wolpi Meal Baskets.

VEGETAL SUBSTANCES.

BASKETRY.

The following specimens are examples of the tray-like baskets made from round willows :

1857. (42085). Fig. 535 shows the mode of its construction.

1858-1871. 1858, (42076); 1859, (42077); 1860, (42078); 1861, (42079); 1862, (42080); 1863, (42081); 1864, (42082); 1865, (42083); 1866, (42084); 1867, (42086); 1868, (42087); 1869, (42088); 1870, (42089); 1871, (42090).

The following numbers refer to specimens of the spiral or coiled basketry, all the features of which are shown in Fig. 536, except the color decoration :

1872-1907. 1872, (42058); 1873, (42051); 1874, (42052); 1875, (42053); 1876, (42054); 1877, (42055); 1878, (42056); 1879, (42057); 1880, (42059); 1881, (42060); 1882, (42061); 1883, (42062); 1884, (42063); 1885, (42064); 1886, (42065); 1887, (42066); 1888, (42067); 1889, (42068); 1890, (42069); 1891, (42070); 1892, (42071); 1893, (42072); 1894, (42090); 1895, (42073); 1896, (42074); 1897, (42075); 1898, (42091); 1899, (42092); 1900, (42093); 1901, (42094); 1902, (42095); 1903, (42096); 1904, (42097); 1905, (42098); 1906, (42099); 1907, (42100).

The following are canteen or water baskets, previously described as to method of making and using them :

1908-1912. 1908, (42101); 1909, (42102); 1910, (42103); 1911, (42104); 1912, (42105); are vase-shaped baskets, of which Fig. 537 is a representative example.

The following are specimens of the same ware, differing only in form and size :

1913-1920. 1913, (42106); 1914, (42107); 1915, (42108); 1916, (42109); 1917, (42110); 1918, (42111); 1919, (42112); 1920, (42113).

1921-1925. 1921, (42114); 1922, (42115); 1923, (42116); 1924, (42117); 1925, (42118), are only noticeable on account of their peculiar form. They are almost top-shaped, with an acute apex at the bottom. The mouth is small, like that of a jug. In one instance (42114) the body slopes from top and bottom to the center, almost forming a ridge. Very few of this form were obtained.

1926. (42119). A double-lobed canteen basket. Many of the clay water-vessels in the collection are made in imitation of this double-lobed basket.

1927-1931. 1927, (42120); 1928, (42121); 1929, (42122); 1930, (42123); 1931, (42124). Ordinary forms of the water-basket.

1932. (42125). A fine, large, and quite perfect specimen of the jug or water-basket, with ears of horse-hair and string attached for use. Quite a number of the ancient water-jars are of this form, and both bear evidence of antiquity.
1933. (42149). Fig. 538 is a good illustration of this form.
- 1934-1937. 1934, (42146); 1935, (42147); 1936, (42148); 1937, (42150), are of the same class of cemented basket-ware. The small fruit-baskets, made of round willows and with much less care, are also of many forms. Some are square, others round, and some with a peculiar flattened body; of the latter there are but few in the collection. They belong to the older class of basketry.
- The following specimens belong to that class:
- 1938-1941. 1938, (42126); 1939, (42127); 1940, (42128); 1941, (42129).
1942. (42130). A specimen of a much finer quality than the preceding. It is long and vase-shaped, with a wide mouth and flaring rim, and woven up from the bottom in oblique ridges.
1943. (42131). A coarsely constructed bowl-shaped basket, of which type the following are also specimens:
- 1944-1951. 1944, (42132); 1945, (42133); 1946, (42134); 1947, (42135); 1948, (42136); 1949, (42137); 1950, (42138); 1951, (42139).
1952. (42140). Specimen of the older basketry, with large depressed body, flat bottom, and jar-like mouth.
- 1953-1956. 1953, (42141); 1954, (42142), 1955, (42143); 1956, (42144), are also different forms of the peach-basket.
1957. (42145). Fig. 540. A large floor or hearth mat frequently found in use among the Pueblos. The specimen in the collection exhibits some skill and taste in weaving it. The material of which it is made is a small round willow.
1958. (42151). A large deep basket, constructed by weaving coarse willow twigs around four upright posts or large sticks. It has a capacity of about two bushels.
1959. (42152). This is a small square basket of the same character.
1960. (42153). A specimen of this ware. It is shown in Fig. 539, exhibits a coarse, loose manner of construction. These are used as fruit-baskets.
- 1961-1962. 1961, (42154), and 1962, (42155). These are examples of the same kind.
1963. (42156). This specimen represents the finest quality of baskets in the collection. They are all more or less tastefully ornamented during the process of plaiting them. They are skillfully and closely woven, and are used for holding the finest of their flour and meal. These are undoubtedly of Apache manufacture. Fig. 541.
1964. (42157). Has been selected as an illustration of this class of baskets, of which the following are examples, differing but little in form:

FIG. 537



42105
($\frac{1}{2}$)

FIG. 538



42129
($\frac{1}{2}$)

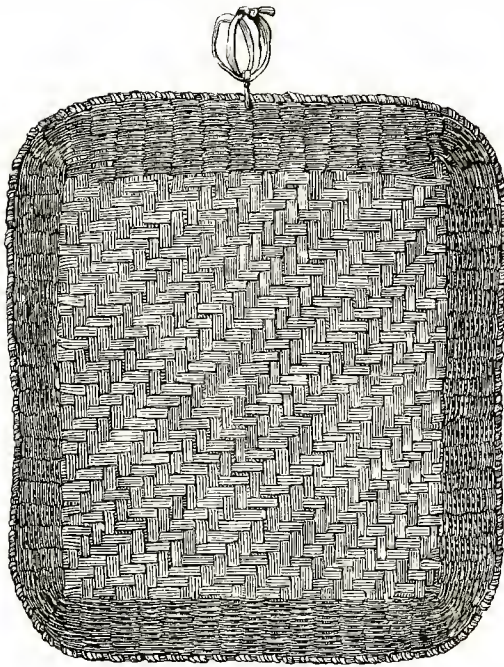
FIGS. 537, 538.—Wolpi Baskets.

FIG. 539



42153
(3)

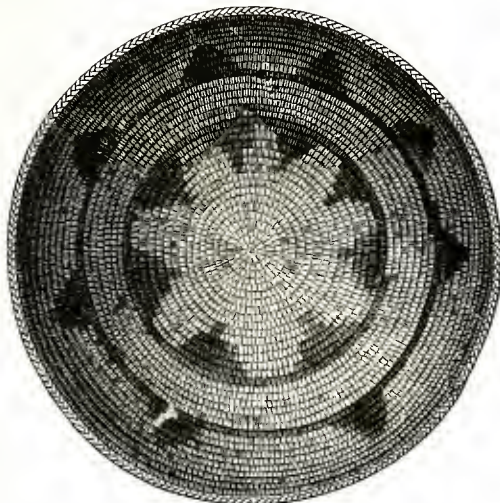
FIG. 540



42145
(8)

FIGS. 539, 540.—Wolpi Fruit Basket and Floor Mat.

FIG. 541



42157
($\frac{1}{5}$)

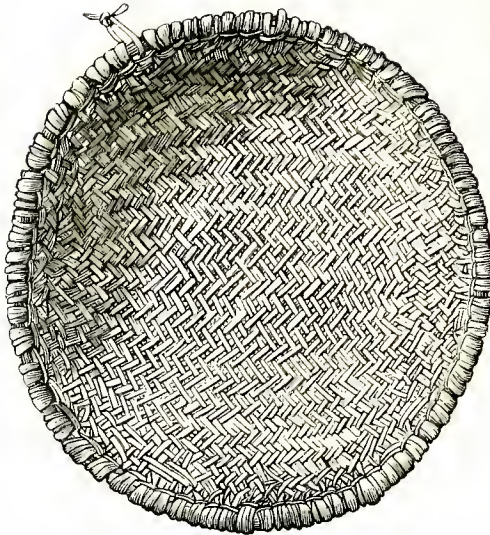
FIG. 542



40160
($\frac{1}{5}$)

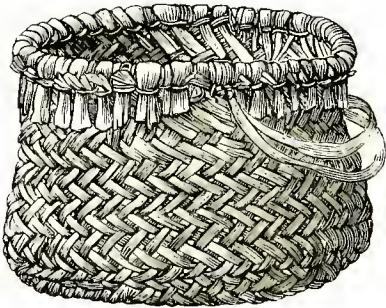
FIGS. 541, 542.—Wolpi Baskets.

FIG. 543



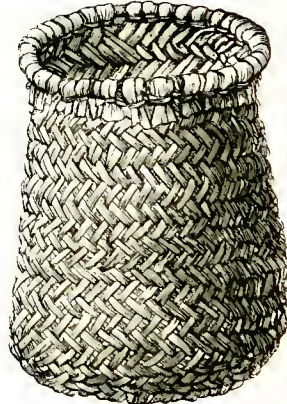
42183
($\frac{1}{6}$)

FIG. 544



42199
($\frac{1}{4}$)

FIG. 545



42171
($\frac{1}{3}$)

FIGS. 543-545.—Wolpi Baskets.

- 1965-1971. 1965, (42158); 1966, (42159); 1967, (42160), Fig. 542; 1968, (42162); 1969, (42163); 1970, (42164); 1971, (42165). The two last are almost flat; the rest saucer or bowl shaped and quite deep.
1972. (42166). Basket of coarse willow ware; platter-shaped.
1973. (42167). Conical-shaped basket of closely woven variety.
1974. (42168). Hemispherical-shaped basket of the same class; small.
1975. (42169). Cylindrical basket; small.
- 1976-1981. 1976, (42170); 1977, (42171); 1978, (42172); 1979, (42173); 1980, (42174); 1981, (42175). Small cylindrical-shaped peach-baskets made of flat yucca leaves. Fig. 545 is an illustration of that class.
- 1982-1987. 1982, (42195); 1983, (42196); 1984, (42197); 1985, (42198); 1986, (42199), Fig. 544; 1987, (42200). Examples of the same class.

The following baskets are made from the broad leaves of the yucca, woven or plaited crosswise in a very simple manner, and wrapped at the rims with leaves of the same plant. The texture of the weaving is quite coarse, not sufficiently close to hold any material smaller than corn or fruit:

- 1988-2006. 1988, (42176); 1989, (42177); 1990, (42178); 1991, (42179); 1992, (42180); 1993, (42181); 1994, (42182); 1995, (42183); 1996, (42184); 1997, (42185); 1998, (42186); 1999, (42187); 2000, (42188); 2001, (42189); 2002, (42190); 2003, (42191); 2004, (42192); 2005, (42193); 2006, (42194), are all specimens of this class well shown in Fig. 543.

DOMESTIC IMPLEMENTS, TOYS, ETC.

2007. (41706). A Shinumo blanket loom, with a blanket partly completed, with all the fixtures and implements employed in the art of blanket weaving. This art, however, attains its highest degree amongst the Navajos.
- 2008-2009. 2008, (41707), and 2009, (41708), are looms exhibiting different modes of weaving.
2010. (41709). A loom with a partly finished garment.
2011. (41683). Fig. 546. Blanket-stick for tightening strands of blankets during the process of weaving. After the thread is passed through from one side to the other this stick is placed over the thread and then firmly beaten down. The following numbers are implements of the same kind. They are called *soo-qua*.
- 2012-2020. 2012, (41684); 2013, (41685); 2014, (41686); 2015, (41687); 2016, (41688); 2017, (41689); 2018, (41690); 2019, (41691); 2020, (41692).
2021. (41888). Blanket stretcher, *tu-he-que-hey*.
2022. (41166). Reed frames, used in weaving belts and garters, called *quey-hu-wuk-ta*.

The following are objects of the same kind :

- 2023-2027. 2023, (41667); 2024, (41668*a*); 2025, (41668*b*); 2026, (41669); 2027, (41670). Implement to show the process of making belts.
2028. (42372). Small notched stick used in weaving belts.
- 2029-2030. 2029, (41998), and 2030, (41999). Short pointed sticks for stretching and drying skins.
2031. (41676). Spindle whorl, *pa-tu-he-kah*. This is a common object of use amongst all the Pueblos. Fig. 547 is an illustration of one of these implements, showing the shaft with spun yarn below the disk. As previously mentioned, this spindle whorl is almost identical with the drill used for perforating stone and shell charms and ornaments. The addition of a cross stick and strings, with the flint tip, are only necessary to convert it into a drill. In both the drills and whorls the disks are made of horn, stone, bone, and wood. For the drill see Fig. 494.
- 2032-2037. 2032, (41677); 2033, (41678); 2034, (41679); 2035, (41680); 2036, (41681); 2037, (41682). All spindle whorls.
2038. (41658). Bow and three arrow-shafts.
2039. (41659). Bow.
2040. (41660). Bundle of four arrow-shafts.
- 2041-2044. 2041, (41661); 2042, (41662); 2043, (41663); 2044, (41664), are bundles of thirty-five arrow-shafts.
2045. (41651). Bow and six iron-pointed arrows.
2046. (41652), (41653). Bows.
2047. (41654). Bow and quiver.
2048. (41655). Quiver and twenty-six iron-pointed arrows.
2049. (41656). Child's bow and two arrows.
2050. (41720). Boy's bow with two arrows.
2051. (41976), Fig. 548. Stick used for hunting rabbits; it is in the form of a boomerang.
- 2052-2055. 2052, (41977); 2053, (41978); 2054, (41979), Fig. 549; 2055, (41980). Same objects as the last. In the Zuñi tongue this stick is called *kle-ān-ne*, and in Shinumo *pu-wick-he-cu-he*.
2056. (41924). Saddle-tree.
2057. (41925). Stirrups, *pu-tut-hum-pee*.
2058. (41119). Sinch hooks, *cu-rah-bat-tow*.
2059. (42000). Wooden hoe, made in imitation of European hoe.
2060. (41693). Wooden forceps, *wat-cha*.
2061. (41909). Pronged stick for rake, called *ta-wish-wy-lah*. See Fig. 550.
- 2062-2063. 2062, (41916), and 2063, (41917). Small yoke-shaped implements for drying the skins of small animals by stretching the skin over them.
2064. (41863). Wooden treasure-box, of which the following numbers refer to specimens, and which are well shown in Figs. 552 and 554:

FIG. 546



FIG. 547



FIG. 548

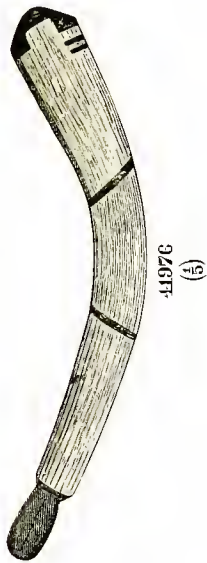
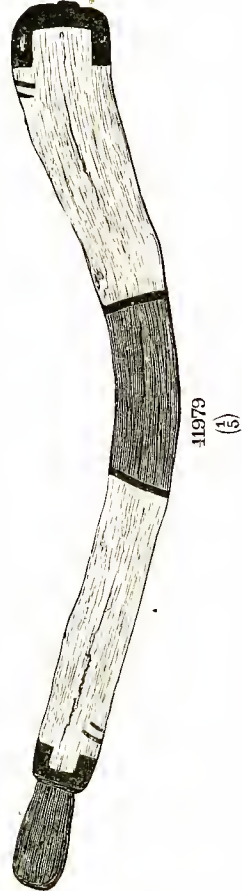


FIG. 549



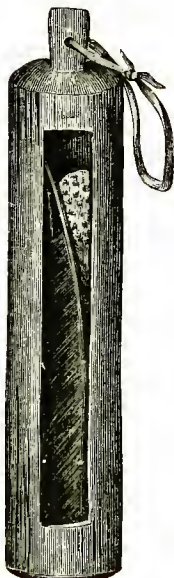
FIGS. 546-549.—Wolpi Wooden Implements.

FIG. 550



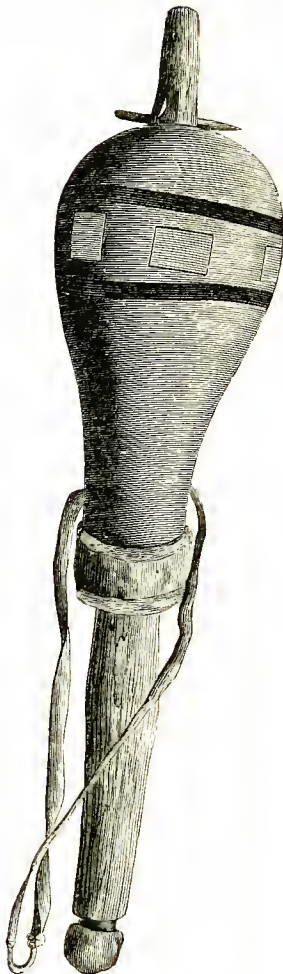
41909
(10)

FIG. 552



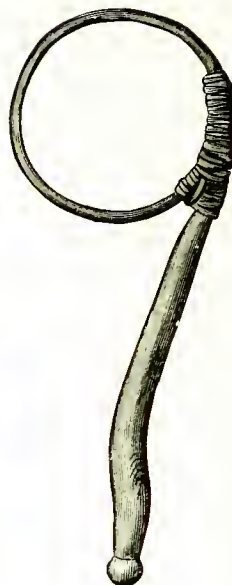
41866
5

FIG. 553



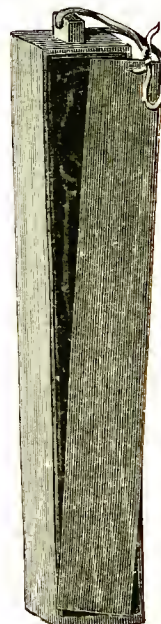
41191
(3)

FIG. 551



41178
5

FIG. 554



41865
4

FIGS. 550-554.—Wolpi Implements.

FIG. 555

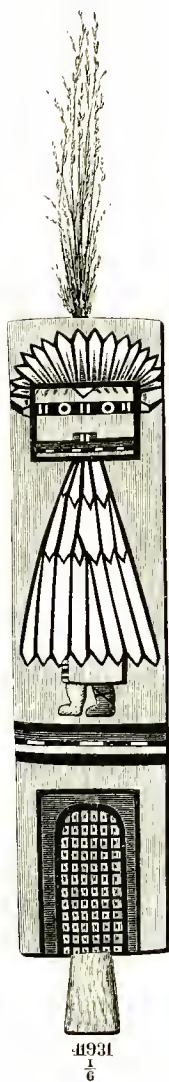


FIG. 556



FIG. 558

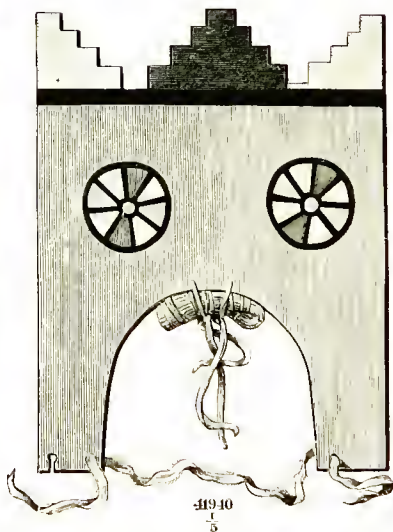


FIG. 557



FIGS. 555-558.—Wolpi Dance Ornaments.

- 2065-2069. 2065, (41864); 2066, (41865); 2067, (41866); 2068, (41867); 2069, (41868).
2070. (41935). Baby cradle, with hoops over the head for net work; made of slats, *mu-hu-tah*.
2071. (41986). Baby cradle made of willow work.
2072. (41987). Cradle without top.
2073. (41988). Toy cradle, of basket work.
2074. (41989). Toy cradle of boards.
2075. (41710). Toy whirligig, made of a disk with two holes through which strings are passed.
2076. (41711). Specimen of Indian corn.
- 2077-2078. 2077, (41715), and 2078, (41716).
2079. (41694). Paint toy, of wood, *tat-chi*.
2080. (41695). Bird snares, made of small sticks like the ramrod of a gun, arranged with horse hairs, *wa-wa-shi*.
2081. (42371). Bunch of very small reed-like grass, called *nen-a-wash-pi* or rain broom.
- 2082-2083. 2082, (41889), and 2083, (41890). Whirling sticks.
- 2084-2886. 2084, (41177); 2085, (41178); 2086, (41179). Specimens of a peculiar drum-stick in general use by the Shinumo, Zuni, and other Pueblo Indians. It is made from a stick, one end of which is shaved off sufficiently to admit of bending the end thus shaved round in the form of a hoop, and then tightly securing it. The hoop portion is used in beating the drum. Fig. 551 is an illustration of one of these drum-sticks.
2087. (41180). Calabash, or gourd, for holding food or water.
- 2088-2090. 2088, (41181); 2089, (41182); 2090, (41183). Ordinary forms of the same vessel.
2091. (41191). Gourd, perforated, with a staff through the center, painted in many colors; held on a pole in dances. See Fig. 553.

ORNAMENTAL OBJECTS.

2092. (41926). Is a flat piece of wood about twenty inches long and five in width, with a notched handle at the lower end. Two bunches of feathers are attached to each edge of it, and a bunch at the top. The form of the ornamentations is shown in Fig. 556; the colors employed in these ornamentations are brilliant red, yellow, blue, and black. The entire design is intended to represent the body of a human being. These objects are carried in the hand in their dances.
- 2093-2097. 2093, (41927); 2094, (41928); 2095, (41929); 2096, (41930); 2097, (41931). These are other examples which are well represented in Fig. 555.
- 2098-2100. 2098, (41932), Fig. 557; 2099, (41933); and 2100, (41934), are sticks, carried in the main dance. They represent lightning.

- 2101-2102. 2101, (41935), and 2102, (41936). Small notched sticks, ornamented with blades of grass and wild-turkey feathers; carried in the dance.
- 2103-2106. 2103, (41937); 2104, (41938); 2105, (41939); 2006, (41940). Wooden objects highly colored with various devices depicted on them. These are worn on the head in dances. Flowers are represented on some; on others, the human face, &c. Fig. 558, an illustration made from one of them.
- 2107-2108. 2107, (41941), and 2108, (41942). Small frames, over which canvas is stretched, to the edges of which are attached various small ornaments; used in dances.
2109. (41943). Small hoop with canvas stretched over it, on which are painted five small objects like stars, used in dances.
2110. (41944). Leather dance-mask, painted.
2111. (41945). Dance-mask.
2112. (41946). Pair of split horns worn in dances.
2113. (41947). Head-dress made in the form of scallops.
2114. (41948). Head-dress of painted sheep-horns.
2115. (41949). Head-dress crown made of basket-ware, to which are attached three projections intended for horns, Fig. 559.
2116. (41950). Corn-husk ornament for the dance.
- 2117-2118. 2117, (41671), and 2118, (41972). Wooden objects made in imitation of a sun-flower, with zigzag or snake-like sticks attached to them, which are used as ornaments in the corn dance, called *pah-wah*.
- 2119-2120. 2119, (41673), and 2120, (41674). Shuttle-cocks, made by inserting the ends of two hawk-feathers in a small block. They are carried in dances.
2121. (42042). Dance-rattle made from a small gourd, embellished in colors of black, red, and white. The gourd is perforated at each side, through which a stick is passed for a handle, cross S's on each side. See Fig. 562.
2122. (41982). Notched stick, with shoulder blade of sheep or deer, for musical instrument. See Fig. 561.
- 2123-2124. 2123, (41983), and 2124, (41984). Notched sticks without the bone.
2125. (41701). Dance ornaments, called *tau-ah-qu-la*, made by attaching semi-circular sticks or hoops to a small pole; ornamented with colors.
- 2126-2129. 2126, (41702); 2127, (41703); 2128, (41704); 2129, (41705), are ornaments of the same character as the preceding.
2130. (41857). Painted gourd-rattle for dances, of which the following numbers are specimens variously ornamented:
- 2131-2135. 2131, (41858); 2132, (41859); 2133, (41860); 2134, (41861); 2135, (41862), of which the illustration of the latter is an example. See Fig. 560.

FIG. 559

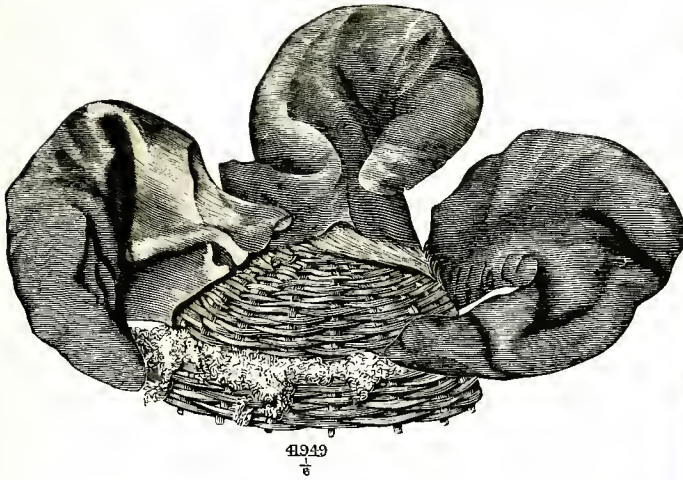


FIG. 561



FIG. 560

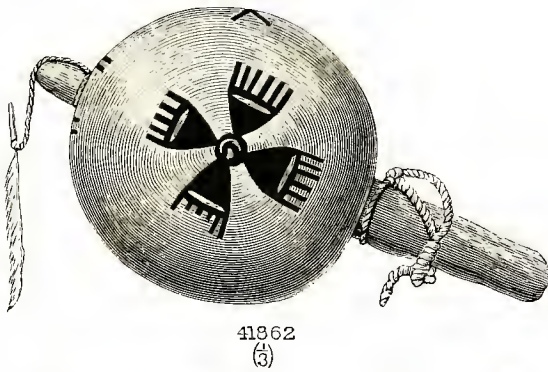


FIG. 562

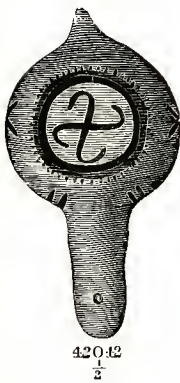


FIG. 563



FIG. 564

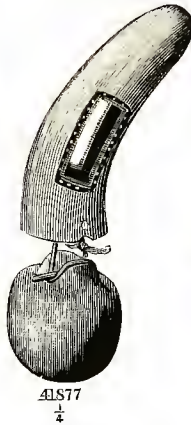
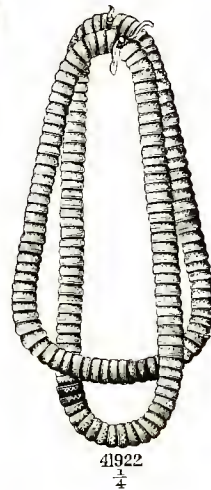


FIG. 565



FIGS. 559-565.—Wolpi Head-dress, Ornaments, &c.

FIG. 566

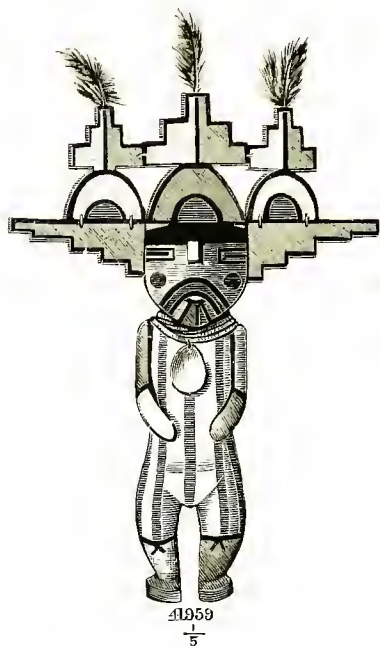


FIG. 567

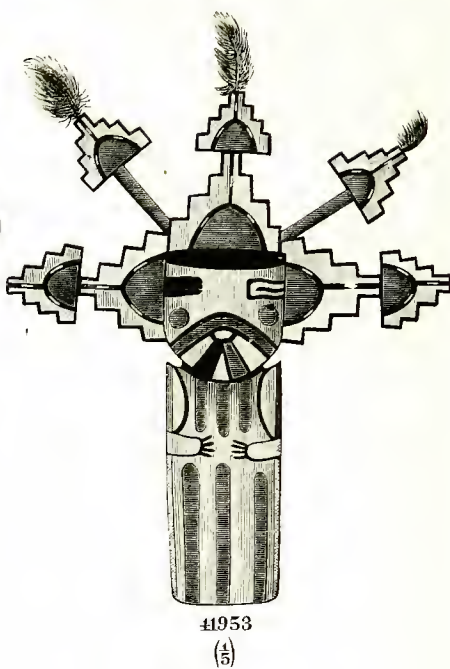
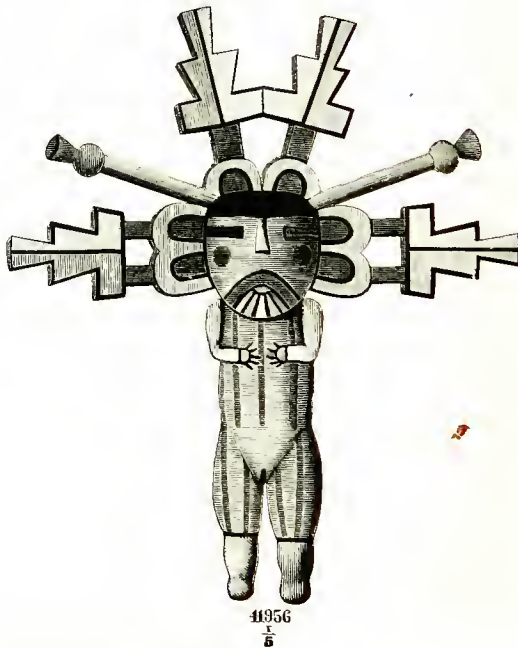


FIG. 568



FIG. 569



FIGS. 566-569.—Wolpi Effigies.

2136. (41883). Flat wooden block, painted, for head ornament.
2137. (41884). Cylindrical blocks, with a cup-shaped cavity in one end, used as gaming blocks.
- 2138-2139. 2138, (41885), and 2139, (41886), are specimens of this block called *sosh-he-wey*.
2140. (41887). Spherical grooved block, painted to represent a melon, used in the melon dance.
2141. (41918). Wooden top, *ree-am-pee*.
2142. (41920). Wooden balls, probably to represent eyes.
2143. (41921). Ball attached to the end of a painted stick, the use of which is not known; probably used in connection with dancing ceremonies.
2144. (41900). Small implement of wood used as a dance ornament.
2145. (41752). Wooden ornament for the head, worn in dancing ceremonies. Two little leather balls are attached to the dotted end; shown in Fig. 563.
2146. (41754). Two small wooden balls with black ends and a white band around the middle; a dance ornament.
2147. (41756). Ornaments for the wrist; made of wooden rings.
2148. (41753). A similar object, painted in various bright colors.
- 2149-2150. 2149, (41881), and 2150, (41882), are slatted wooden cylinders with conical blocks attached to them. Ornaments for dancing ceremonies.
2151. (41876). Wooden ball attached to slatted gourd-neck, used as an ornament in the dance.
2152. (41877). See Fig. 564.
- 2153-2154. 2153, (41878), and 2154, (41879). Specimens varying from the preceding only in colors.
2155. (41922). Necklace of acorn hulls, *tuck-we-tah-gua-we*. Fig. 565.
2156. (41923). The same kind of an ornament.

STATUETTES.

These objects vary in form, size, and decoration, the largest being about thirty inches high, the smallest not more than five. They are objects of worship in one form or another. The illustrations in the woodcuts and colored plates will convey a better idea of them than could be given in a description. They are entirely composed of wood, with feathers and other small ornaments attached to them occasionally.

2157. (41951). This is the largest one of these images in the collection, very highly ornamented with bright variegated colors. See Fig. 571.
2158. (41952). One of these objects, differing only in size and manner of decoration.
2159. (41953). This is a specimen of one of these images exhibited in Fig. 567. The form is common to many of them, showing the pyramidal projections attached to the head, with feathered tips.

- 2160-2161. 2160, (41954), and 2161, (41955). Similar objects.
2162. (41956). Fig. 569. This exhibits a female figure with variegated colors, and in addition to the pyramidal projections from the head has two round sticks with a ball and crown.
- 2163-2164. 2163, (41957), and 2164, (41958). Similar to Fig. 569.
2165. (41959). Fig. 566. The general characteristics of this specimen are the same as those already referred to, but it differs in the arrangement of the head attachments; two rows of pyramids are shown; the lower one is inverted; the two rows are separated by three arches; the upper pyramids are ornamented at the tips with feathers. A necklace of acorn hulls is around the neck, with a shell ornament attached to it. Garters are represented at the knees. In this specimen, as in many others, the feet are only represented by stubs. The body is decorated to represent fancifully colored clothing.
- 2166-2168. 2166, (41960); 2167, (41961); 2168, (41962). Similar to the preceding.
2169. (41963). This is well shown in Fig. 570.
- 2270-2172. 2170, (41964); 2171, (41965); 2172, (41966). Objects of the same character.
2173. (41967). This specimen (Fig. 568) differs considerably in form from those previously mentioned. As will be observed by reference to the figure, it has a conical projection from the top of the head, representing a hat with a feather at the top, with two short, round blocks at the base of the hat, and two round balls to represent ears. The skirt is of cloth. The specimen is brilliantly decorated with paint.
2174. (41968). Shows the form and details of carving, highly colored.
2175. (41969). A brilliantly colored image, which is well shown in colors in Fig. 572.
- 2176-2180. 2176, (21970); 2177, (41971); 2178, (21972); 2179, (21973); 2180, (41974), are similar objects.

ANIMAL SUBSTANCES.

HORN AND BONE.

2181. (40113). Large ladle from horn of mountain sheep, called *ál-ly-ku*. See Fig. 573.
- 2182-2188. 2182, (41891); 2183, (41892), 2184, (41893), 2185 (41894), 2186 (41895), 2187 (41897), and 2188 (41898). No. 2182 is a bone awl or perforator, of which the others are examples, as shown in Fig. 575.
- 2189-2192. 2189, (41990); 2190, (41991); 2191, (41992); 2192, (41193). Goats' horns perforated with small round holes, through which arrow shafts are passed to smooth and straighten them. Fig. 576 is an illustration of one of them, called *hoth-quen*.



FIG. 570 (41963)

FIG. 572 (41969)

FIG. 571 (41951)

JULIUS BIER LITH.

Figs 570-572—SHINUMO STATUETTES.
 $\frac{3}{4}$ NATURE

FIG. 573



40113
 $\left(\frac{1}{4}\right)$

FIG. 574



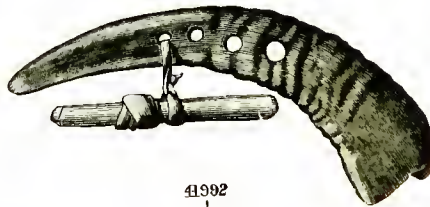
41855
 $\left(\frac{1}{3}\right)$

FIG. 575



41891
 $\frac{1}{3}$

FIG. 576



41992
 $\frac{1}{4}$

FIGS. 573-576.—Wolpi Ladle, Rattle, &c.

- 2193-2196. 2193, (41994); 2194, (41995); 2195, (41996); 2196, (41997). Bundles of arrow shafts.
2197. (41855). Bunch of ox hoofs or toes used as a rattle in dances. These same objects are frequently attached to the edges of turtle shells for the same purpose. See Fig. 574 in Zuñi collection.
- 2198-2199. 2198, (41763), and 2199, (41764). Small hoops with painted net-work stretched across them; dance ornaments.
- 2200-2201. 2200, (42346), and 2201, (42347). Shell ornaments, *ya-wag-sha-na*.
2202. (41854). Medicine shells.

SKIN.

2203. (41737). Cap made from the skin of a panther's head, with feathers attached to the top of it, called *pow-how-wi-ta-nah-chi*.
2204. (41738). Head-dress made of the skin of a panther's head, so as to preserve the natural appearance of the animal, with feather ornaments attached.
2205. (41740). Fur cap, ornamented with feathers.
2206. (41743). Boy's sling, *tow-wow-kin-pi*.
2207. (41842). Large rabbit-skin robe, made by twisting strands of rabbit-skins with the fur attached, and then sewing the strands together, *tah-ru-pe*.
2208. (41843). Small robe of the same character.
2209. (42354). Buckskin wrist-guards, faced with metal, Fig. 579. These guards are common with nearly all tribes of Indians, and are designed to protect the wrist from the string of bows used in war and in hunting.
2210. (41869). Women's buckskin leggings.
2211. (41870). Women's buckskin leggings.
2212. (41739). Anklet of buckskin, *pi-la-wak-chi*.
2213. (41741). Anklet of buckskin.
2214. (41828). A pair of men's moccasins, which the accompanying illustration shows well. They are made of buckskin, but differ from the usual manner of making moccasins, called *pow-chi*. See Fig. 578.
2215. (41721). Baby's moccasins, *tow-tow-chi-we-ha*.
2216. (41722). Pair child's moccasins, *tow-tow-chi-we-ha*.
2217. (41723). Woman's moccasins, *tow-chi*.
2218. (41829). Pair of child's moccasins, *pow-tow-chi-u-wez-ha*.
- The following are specimens of children's moccasins:
- 2219-2222. 2219, (41830); 2220, (41831); 2221, (41832); 2222, (41833).
2223. (41755). Small gaming ball covered with goat skin.
2224. (41745). Buckskin paint bag, beaded.
2225. (41746). Buckskin paint bag, beaded.
2226. (41747). Buckskin paint bag, ornamented with fringe.
2227. (41748). Buckskin paint bag, ornamented with fringe.

2228. (41827). Deer-skin pouch, *la-hab-ush-i-wa*.
 2229. (41657). Small deer-skin quiver and one arrow.
 2230. (41841). Buckskin embroidered with beads.
 2231. (41871). Buckskin dyed black.
 2232. (41872). Buckskin dyed black.
 2233. (41873). Buckskin dyed black.
 2234–2235. 2234, (41717), and 2235, (41719), are riding whips made of plaited leather or raw-hide, called *wi-wa-pi*. See Fig. 550.
 2236. (41176). A flat drum, made by stretching goat-hide over a wide hoop, and tightened by lacing crosswise around the edge with a cord of the same hide. One side is plain, the other is decorated with a figure, which is not interpreted. This specimen is from Shinumo, but it does not differ from those used by many of the other Pueblo tribes. Fig. 581.
 2237. (42351). Fig. 577. Leather wristlets, ornamented with wild turkey feathers.
 2238–2239. 2238, (42352), and 2239, (42353), are objects of the same kind, differing somewhat in ornamentation.
 2240. (42354). Ornamental wristlets with metal facing.
 2241. (42355). Buckskin wrist-guard, to protect the wrist from the bow-string when shooting arrows.
 2242–2243. 2242, (42356), and 2243, (42357), are similar objects, made of leather.
 2244. (42358). Anklets of leather or rawhide strips.
 2245. (42359). Anklets.
 2246–2247. 2246, (41749), and 2247, (41750). Leather bags for fire stones.
 2248. (41850). Leather attachments for moccasins.
 2249. (41765). Leather gaming ball, *tat-chi*.
 2250. (41758). Leather or rawhide lash rope with rings, called *pe-qui-sha*.
 2251. (41874). Specimen of undressed rawhide.
 2252. (41875). Rawhide bag, painted, *cah-he-ne-si-vah*.
 2253. (41844). Narrow strip of canvas, painted to represent some fanciful feature.

The following are specimens of the same :

- 2254–2258. 2254, (41845); 2255, (41846); 2256, (41847); 2257, (41848); 2258, (41849).

WOVEN FABRICS.

2259. (41834). Woven belts or sashes, of which the following are examples, and which are well shown in colors by Figs. 582 and 583 :
 2260–2269. 2260, (41713); 2261, (41803); 2262, (41255); 2263, (41823); 2264, (41835); 2265, (41836); 2266, (41837); 2267, (41838); 2268, (41839); 2269, (41840).
 2270. (41718). Woven waist belt, ornamented with sheep and goats' toes, attached to the lower edge of the belt.
 2271. (41751). Head ornament of braided hair.

FIG. 577



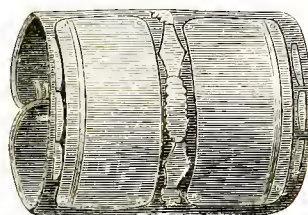
42351

FIG. 578



41825
($\frac{1}{5}$)

FIG. 579



42351
($\frac{1}{3}$)

FIG. 580



41719
 $\frac{1}{6}$

FIG. 581



41176
 $\frac{1}{6}$

FIGS. 577-581.—Wolpi Wristlets, Moccasins, etc.



FIG. 583 (41823)

JUANES BIEB, UTM.



FIG. 582 (41255)

Figs. 582-583 - SHINUMO BLANKETS.
1/4 NATURE.

2272. (42361). Flat circular pad, composed of hair, over which the Shinnu women wear their hair, which appears like two wheels over the ears.
2273. (41767). Head ornament for flower dance, called *tah-chi*.
2274. (41769). Ornament similar to the preceding.
2275. (41766). Maiden's hair strings for head-dress, called *chi-ca-ha-pi*.
2276. (41735). Rosette for head-dress in dance.
2277. (41736). Rosette with hair tufts attached; dance ornament for the head.
2278. (41744). Woolen tassel, ornament for dress.
2279. (41762). Neck ornament, with feathers attached, called *how-wah-he-quaw-wi*.
2280. (41759). Feather charms.
2281. (41761). Woven band for the head, called *mong-at-a*.
2282. (42365). Fig. 584. Anklets, ornamented with porcupine quills; some are beaded.

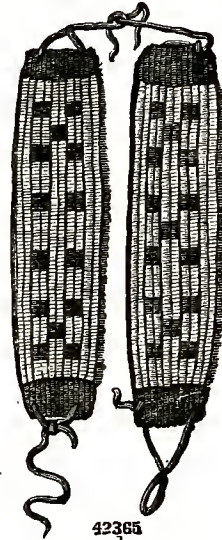


FIG. 584.

The following are specimens of the anklets, variously ornamented:

- 2283-2286. 2283, (42362); 2284, (42363); 2285, (42364); 2286, (42366).
2287. (41742). Woman's knit leggings.
2288. (41826). Woven hair sinch or saddle-girt, *ah-chis-clah*.
2289. (41757). Braided lasso or lariat.

COLLECTIONS FROM LAGUNA.

ARTICLES OF CLAY.

WATER VASES.

These are mostly of the usual form, though some should, probably on account of their shape, be designated as jars. A few have the margin undulate, and some are without any distinct neck.

They are generally well made and very symmetrical, of white ware, with decorations in black, brown, or red colors.

2290. (41295). Small, with opposite handles or ears, resembling rats peeping into the vessel; body decorated with broad oblique stripes and figures resembling corn blades. Shown in Fig. 585.
2291. (42382). Small, decorated with birds fighting, their feathers ruffled. Fig. 612.
2292. (42384). Small, with a single broad undulate band around the body, having a white stripe in the middle marked with a row of dots.

2293. (42385). Fig. 586. Scalloped and straight band around the neck; body with two interlaced undulate bands, with triangles alternately in the inclosed and upper spaces.
2294. (42380). Red base, upright black bands in the center, with brown band below neck, and oblique bars extending from rim downward. See Fig. 610.
2295. (42381a). Fig. 587. The leaves in the decorations of this piece are probably designed to represent corn blades. There is something about the figures here used which leads one to believe they are, in part, at least, symbolical.
2296. (42386). Fig. 588. Large flower ornaments surrounding large birds with crests and ruffled feathers, one in each space. The large-billed bird may be intended for a raven; the other the California quail.
2297. (42387). Small margin, with images of three birds with spread wings on it; figures of two birds, with a few small flowers covering the body. See Fig. 611.
2298. (42388). Small. Zigzag band around the neck; figures on the body as in Fig. 585.
2299. (42389). Jar-shaped; zigzag band extending on neck and shoulder; a straight and scalloped band just below the shoulder.
2300. (42390). No neck, broadest near the top; birds, and flowers with stem. Small.
2301. (41391). Without neck; birds only, small.
2302. (42392). Without neck. Birds picking grass. Small flowers.
2303. (42393). Scalloped margin; birds only, small.
2304. (42394). Fig. 589. Scalloped margin. Deer, which seems to be biting the leaves of a plant.
2305. (42395). Fig. 590.
2306. (42396). Jug-shaped, scalloped margin, with four bands of crescents on the body.
2307. (42397). Jug-shaped, with square mouth; zigzag line around the neck. Scrolls and oblique diamond figures on the body; small.
2308. (42398). Fig. 591. Ears in the form of animals peeping into the vessel.
2309. (42399). Small, with crude images of animals on the margin; birds alone on the body.
2310. (42400). Small; no neck, square mouth; image of a rabbit at each corner on the rim; birds and checkered square on the body.
2311. (42401). Small and similar to preceding, except that there are only corn leaves and a little square on the body.
2312. (41402). Similar in form to the preceding; image of an animal at one corner only; zigzag line around the neck; double undulate line around the body, with dots above and below.
2313. (41403). Similar to No. 2310, except that it is more slender and jar-shaped; image of a dog or coyote at each corner; figure of a ladle and a diamond on the body.

FIG. 585



41295
($\frac{1}{3}$)

FIG. 586



42385
($\frac{1}{3}$)

FIG. 587



42381
($\frac{1}{4}$)

FIGS. 585-587.—Laguna Water Vases.

FIG. 588



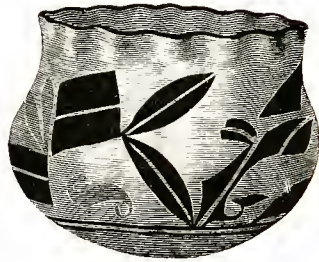
42386
($\frac{1}{4}$)

FIG. 589



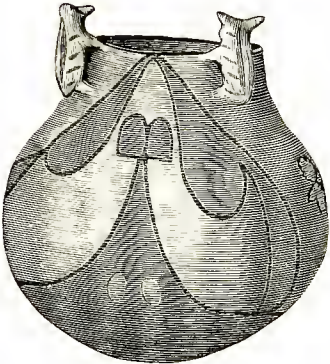
42394
($\frac{1}{3}$)

FIG. 590



42395
 $\frac{1}{3}$

FIG. 591



42398
 $\frac{1}{3}$

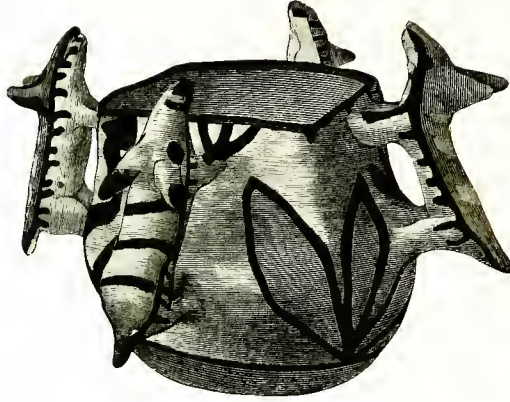
FIG. 592



42398
($\frac{1}{3}$)

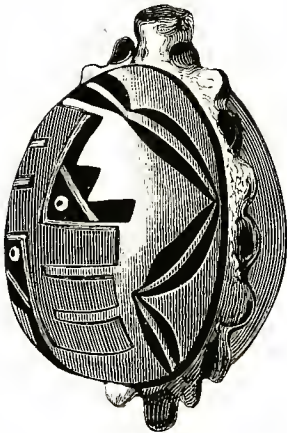
FIGS. 588-592.—Laguna Water Vessels.

FIG. 593



41299
(2)

FIG. 594



42412
(3)

FIG. 595



42413
(3)

FIG. 596



42409
(3)

FIGS. 593-596.—Laguna Water Jars.

2314. (41404). Jar-shaped, with a round mouth, one animal on the margin; triangular lines on the body.
2315. (42406). Regular shaped olla of medium size; large figure of leaf twigs arranged in the form of a Maltese cross, surrounded on the side by broad curved lines or stripes.

The following are but slightly decorated:

- 2316-2317. 2316, (42376), and 2317, (42378). With one or two simple narrow bands or lines.
2318. (42780). With slight oblique lines on the neck, and a few broad upright lines in two groups on the body.
- 2319-2320. 2319, (42379), and 2320, (42381*b*). Without decorations of any kind.

WATER JUGS AND JARS.

2321. (41299). Fig. 593. Canteen with the images of four dogs or coyotes on it. Leaf decorations.
2322. (41300). Canteens, regular form. Irregular figures.
2323. (42412). Fig. 594. Canteen of regular form, scalloped band, leaves and geometrical figures.
2324. (42413). Fig. 595. Olla-shaped canteen. The top is depressed and ornamented with a scalloped band; immediately below this is a broad band consisting of two plain, narrow stripes, between which is a row of oblong figures arranged in a zigzag pattern; around the middle of the vessel there is a sparsely serrate band, interrupted at intervals by small circles, in each of which there is the form of a cross.
2325. (42409). Fig. 596. The ornamentation on this piece is rather peculiar and worthy of attention, especially the bands around the columns.
2326. (42411). Double pepper and salt box, square form, with two handles side by side; birds mounted on the handles; figures of elk on the sides and ends in procession.
2327. (42475). Moccasin; rude.

PITCHERS.

These are well formed, evidently in imitation of those introduced by the white population. All similar in form, with handles. White ware with decorations; of medium size.

2328. (41298). Shown in Fig. 592.
2329. (42405). Diamond scroll in the upper zone; a band of triangles with points directed upward in lower zone.
2330. (42406). Flower or rosette in upper zone, one on each side; no other figures.
2331. (42407). Broad band around the neck, from which two long-pointed triangles or acuminate figures point downwards; then another simple straight band, and below this a zigzag band.

2332. (42408). Scroll band around the neck; a band of hour-glass figures around the shoulder.
2333. (42410). With an undulate band around the bowl.

EFFIGIES.

These are of white decorated ware, and in the form of birds and quadrupeds; the orifice being usually in the top of the head, but in birds it is occasionally at the tail, and in the quadruped forms sometimes in the breast.

Birds.

These are frequently without feet, &c.; one or two double ones are on pedestals.

- 2334-2347. 2334, (41301); 2335, (41302), Fig. 597; 2336, (41303), Fig. 598; 2337, (41304); 2338, (41305); 2339, (42414), Fig. 608; 2340, (42415), Fig. 599; 2341, (42418), Fig. 609; 2342, (42419); 2343, (42423); 2344, (42426); 2345, (42427); 2346, (42428); 2347, (42429), are all similar to that represented in the Figures; some of them are intended to represent other birds than ducks.

2348. (42417). Fig. 600. With two heads on a pedestal.

2349. (42420). Two heads, but not on a pedestal; a handle on the back in the form of a fox or dog. See Fig. 605.

- 2350-2352. 2350, (42421); 2351, (42422); 2352, (42424). Similar to those shown in Fig. 598, but the decorations are scrolls and triangular figures. The first has a flower or rosette on the breast.

2353. (42425). Two-headed; not on pedestal; lines, triangles, &c.

2354. (42435). With a crest and long tail; apparently a rooster.

Quadrupeds.

2355. (41306). Fig. 601. This represents a sheep. The orifice is in front of the head.

- 2356-2357. 2356, (41307), Fig. 609, and 2357, (41309). These are probably intended for sheep, but they are so rude that it is not possible to determine with any certainty. Bark colored.

2358. (41308). A cow; although rude, the characteristics are well given, even to the hoofs and udder; spotted on the back and breast. Coloring on the sides intended to represent hair.

2359. (42430). Shown on Fig. 606.

2360. (42431). Fig. 602. This and the preceding figure are evidently intended to represent rabbits.

- 2361-2362. 2361, (42432), and 2362, (42433). Similar to the last; apparently intended for a figure of the ass (*Burro*), though the spots on the former are inappropriate. The latter is decorated on the side with the figure of another quadruped.

2363. (42434). Animal unknown.

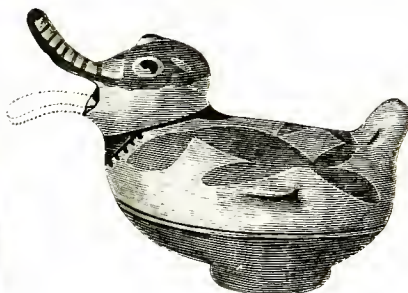
- 2364-2365. 2364, (42436), and 2365, (42437). Animal not determinable; decorated with spots.

FIG. 597



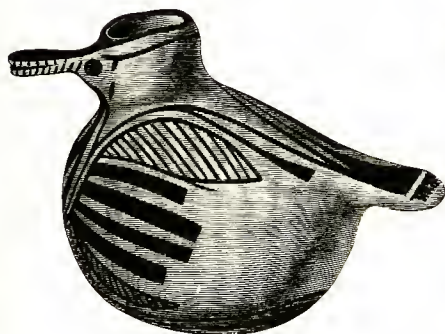
41302
(3)

FIG. 598



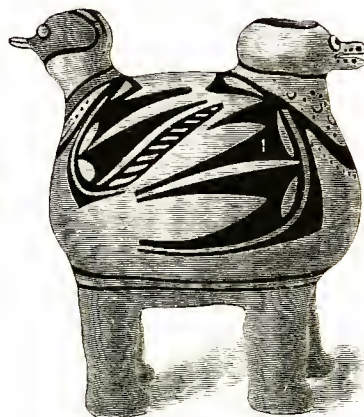
41303
(1/3)

FIG. 599



42415
(2)

FIG. 600



42417
(3)

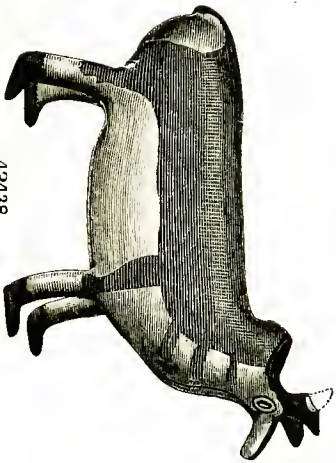
FIGS. 597-600.—Laguna Effigies.

FIG. 601



41306
(3)

FIG. 603



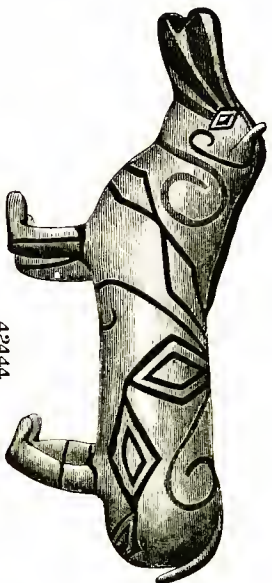
42438
(3)

FIG. 602



42431
(3)

FIG. 604



42444
(3)



FIG. 605 (42420)



FIG. 606 (42430)



FIG. 607 (41307)



FIG. 608 (42414)



FIG. 609 (42416)

Figs. 605-609—LAGUNA POTTERY.
 $\frac{2}{3}$ NATURE.

JULIUS BIEN, LITH.



FIG. 610 (42380)



FIG. 611 (42387)



FIG. 612 (42382)



FIG. 613 (42473)



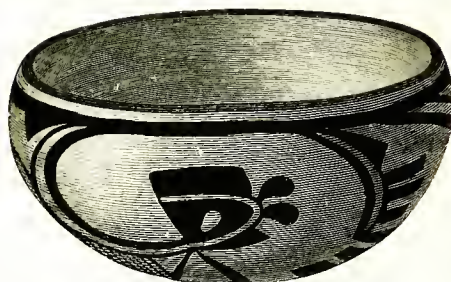
FIG. 614 (42469)



FIG. 615 (42471)

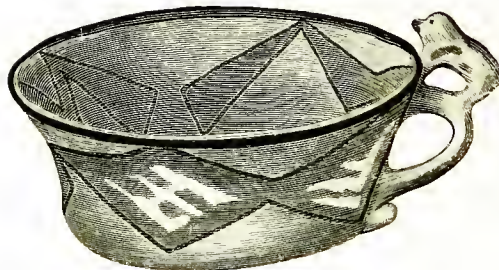
FIGS. 610-615-LAGUNA POTTERY.
1/4 NATURE

FIG. 616



41297
 $\left(\frac{1}{2}\right)$

FIG. 617



42452
 $\frac{1}{3}$

FIGS. 616, 617.—Laguna Eating Bowls.

2366-2371. 2366, (42438), Fig. 603; 2367, (42439); 2368, (42440); 2369, (42441); 2370, (42442); 2371, (42443). Antelope and elk. The first is evidently an antelope, and possibly the third and fifth. The rest are certainly elk. Decorations simple.

2372. (42444). Probably a dog or coyote, with scrolls and diamond figures. See Fig. 604.

2373. (42445). Probably a horse.

Human figures—dolls.

2374-2377. 2374, (42447); 2375, (42448); 2376, (42449); 2377, (42450).

Females; simple.

2378. (42446). Is a pretty fair representation of a chair.

EATING BOWLS.

The Laguna bowls are mostly of two sizes, either large or small. The former are eating bowls and are of the general form, or perhaps more hemispherical than usual. The small ones vary in shape from the preceding form to that of a flat-bottomed basin. The decorations present but little similarity to those we have previously described from other tribes; white ware with colored decorations.

Small bowls. Decorations all external:

2379. (41296). Square mouth, with two sides somewhat flattened. Scrolls and leaf-like figures on the outside.

2380. (41297). Fig. 616. Shown in the figure.

2381. (42451). Basin-shaped, with a handle on one side and a lip on the other; simple marginal and basal band with oblique lines.

2382. (42452). Fig. 617. Same form, with handle on which is seated some animal, apparently a dog, no lip. Band of diamond figures with central spaces. These two are the only specimens which have handles.

The following are quite small, basin-shaped, decorated with leaf-like figures:

2383-2388. 2383, (42453); 2384, (42454); 2385, (42457); 2386, (42458); 2387, (42459); 2388, (42460).

The two following are small, of regular form:

2389. (42455). With two zigzag lines around the body.

2390. (42456). With geometrical figures.

Large bowls.

2391. (41265). No external decorations; radiating lines and large spaces inside.

2392. (42474). Inner zigzag marginal line as on Zuñi bowls; outer decorations also somewhat like the usual triangular figures on the Zuñi bowls.

The following are without inner decorations:

2393-2395. 2393, (42466); 2394, (42468); 2395, (42472). With broad band of geometrical figures; the first with a narrow scalloped band bordering the large band below.

- 2396-2397. 2396, (42467), and 2397, (42473). With irregular geometrical figures; no band.
 2398. (42469). With diamond marginal band; irregular figures below. Fig. 614.
 2399. (42470). The large circular scroll with irregular figures; no band.
 2400. (42473). Scalloped circle with a square in it, and leaf-like figures. Fig. 615.

COLLECTIONS FROM ACOMA.

ARTICLES OF CLAY.

WATER VASES.

There are but few pieces of this pottery, yet a careful examination of these since my return increases my desire to procure more. The Acoma bears a strong resemblance, especially in the ornamentation, to that from Laguna. All that was obtained was of white ware with decorations in color. In this pottery, in most cases where animals are figured, they have a base or ground on which to stand.

2401. (39578). Medium size, figures of birds, ant-hills, and cactus. No band on the neck.
 2402. (39581). Fig. 618.
 2403. (39582). Very pretty specimen, quite symmetrical, broad jar-shaped, a scalloped band on the neck with little tassels suspended from it, possibly intended to imitate fringe. Large triangles on the body pointing to the right, each tipped with a flower.
 2404. (39730). Small scalloped band around the neck similar to Fig. 624.
 2405. (41310). Large double band of triangles on the neck; body with a band of large diamonds, or squares placed as diamonds, with checkered centers and crescents.
 2406. (41313). No band on the neck; birds and ant hills.
 2407. (41314). No band on neck; large elk and some irregular figures.
 2408. (41315). No band on neck; bird on the ground amid leaves and flowers.
 2409. (41316). Fig. 619. The ornamentation on this is more than usually spirited.
 2410. (41318). Scalloped margin, no neck-band; belt of large open diamonds around the body, each upper corner capped with three leaves. See Fig. 621.
 2411. (41317). Large size; a double band of crescents around the neck; then on the shoulder an arched band with a central stripe of diamonds; below this a double line of inverted crescents, and below this a large three-leaved plant. See Fig. 620.

FIG. 618



39581
($\frac{1}{4}$)

FIG. 619



41316
($\frac{1}{4}$)

FIGS. 618, 619.—Acoma Water Vases.



FIG. 620 (41317)



FIG. 621 (41318)



FIG. 622 (42377)

FIGS. 620-622—ACOMA POTTERY
¾ NATURE

2412. (42378). Plain.
 2413. (42383). Small, with lines of outline crescents around the body.
 2414. (42317). See Fig. 622. .

PITCHERS.

White decorated ware with handles:

2415. (41311). Regular form, of medium size, with a broad zigzag band around the neck and another around the body. The latter has in each large fold something like an arrow-head with point broken off.
 2416. (41312). Olla-shaped neck with short oblique bands; body with large and small triangles.

EATING BOWLS.

The following specimens are small:

2417. (42461). Shaped exactly like the small soup bowl in use at the present day among the whites; with foot encircled by a vine with well-formed leaves. A pretty piece.
 2418. (42462). Regular form, with an outline zigzag band.
 2419. (42463) and (42464). Very small, conical in shape, the former marked with slender lines running around it, the latter with dots.

COLLECTION FROM COCHITI.

ARTICLES OF CLAY.

WATER VESSELS.

Size: height 6 to 9 inches, diameter 6 to 15 inches.

These are of the same form as those of Zuñi, but the curves and outlines are much more graceful, and there is a delicacy in the finish which places them above the Zuñi pottery and indicates a greater freedom and confidence in the ceramic artist. The rim is often slightly flared, the neck more distinct and regularly formed.

The only figure given of this interesting group is not one of the regularly formed specimens. They are all white ware with decorations in black.

2420. (39501). Scalloped band around the neck; body divided into three compartments by upright double lines with rosette in one and twigs in the others.
 2421. (39502). Pueblo or terraced figures around the body bordered by an undulate line below. This is of special interest.
 2422. (39503). Decorated with sunflower, the stem and leaves on the body; straight and undulate lines around the neck.

2423. (39504). Decorated with straight and undulate bands.
 2424. (39505). With figures of birds on the neck; and a tolerably well executed true meander or Greek fret around the body. Evident imitation of European pattern.
 2425. (39506). Straight and undulate lines on the neck, triangle pointing downwards, leaves and insects on the body.
 2426. (39509). Depressed; with rosettes and geometrical figures on the upper half of the body.
 2427. (39634). Globular in form, without neck; scalloped marginal band; figures of chickens on the body.
 2428. (39731). Fig. 624. Small size.
 2429. (39733). Small size, similar in form to the preceding, with scalloped band around the neck, and scalloped arches on the body. Shown in Fig. 623.

Globular vessels with handles, used for holding water. These are of two forms: those which are almost or quite spherical, with wide mouth at the top; and those which resemble tea-pots, and open through a spout in the form of the head of a bird or other animal. These are sometimes globular, with opening at the top. Size shown in the illustrations.

2430. (39557). Undulate band around the margin; figures of fish on the body.
 2431. (39558). Undulate line round the margin; figures of deer, bird, and fruit.
 2432. (39559). With figures of triangles and leaves on the body.
 2433. (39560). With head of a bird projecting from one side; marked with outline triangular and lunar figures on the body.
 2434. (39561). Head of an animal projecting from one side.

Canteen-shaped vessels, with openings through a spout in the form of the head of some animal. In some instances, where these are in the form of a bird with the head for a spout, at the opposite end or side is the representation of a tail, but often the latter is wanting. Handle single, and usually on the top, unless otherwise specially mentioned.

- 2435-2436. 2435, (39563), and 2436, (39567). These are bird-shaped, with simple meander bands round the neck, and procession or herd of sheep or goats on the body. Head and tail shown. The former is seen in Fig. 625.
 2437. (39564). Form of a bird without tail; decorations simple.
 2438. (39565). Shown in Fig. 626.
 2439. (39568). Bird without tail; figure of an Indian with a gun in his hand, leading a calf followed by a cow.
 2440. (39569). Bird with rude tail; figures of fishes and bird and a scalloped band below.
 2441. (39570). Bird without tail; feather figures on breast; oblique checkered band to represent wing.

FIG. 623



39733
(3)

FIG. 624



39731
(3)

FIGS. 623, 624.—Cochiti Water Vessels.

FIG. 625



39503
 $\frac{1}{3}$

FIG. 626



39565
 $\frac{1}{3}$

FIGS. 625, 626.—Cochiti Water Vessels.

FIG. 627



39573
 $\frac{1}{3}$

FIG. 628



39720
 $\left(\frac{1}{3}\right)$

FIGS. 627, 628.—Cochiti Water Vessels.

FIG. 629



39725
(3)

FIG. 630



39511
3

FIGS. 629, 630.—Cochiti Water Vessels.

FIG. 631



39717
($\frac{1}{3}$)

FIG. 632



39721
($\frac{1}{2}$)

FIG. 633



39718
($\frac{1}{3}$)

FIG. 634



39714
($\frac{1}{3}$)

FIGS. 633, 634.—Cochiti Water Vessels.

2442. (39571). With two heads opposite, handle crosswise between them; serrate bands around the necks; figures of birds on the body.
2443. (39572). Representing a double-headed duck, with a single tail at opposite end; square handle; outline flower or rosette on the body.
2444. (39573). Form and decorations shown in Fig. 627. Probably intended for a dog.
2445. (39574). Form like preceding; decorations, fish and grass; latter well shown.
2446. (39575). Similar in form to preceding, but with the fore-legs added. Decorations, collar or band around the neck and fish on the body.
2447. (39579). Without handle, canteen-shaped, with dark head on one side; decorated with flowers and birds.
2448. (39696). Bird's head on top, tail present, no handle; jug-shape; feather on back, scrolls and flower on the side.
2449. (39697). Animal's head; no tail; open on top as well as through a spout; scalloped margin; birds and twigs on the body.
2450. (39698). Similar in form to the preceding, and with similar decorations.
2451. (39699). Similar in form, but not open on top. Man, boy, and birds, with lines or shading to represent the ground.
- 2452-2458. 2452, (39701); 2453, (39713); 2454, (39715); 2455, (39720); Fig. 628; 2456, (39725), Fig. 629; 2457, (39727); 2458, (39730). These are somewhat of bird form, with globular body and without tail. Nos. 2455, 2456, and 2457 are open on top, the others are not. Decorated with figures of birds, and sometimes flowers or twigs. The bird figures on No. 2453 (39713) are evidently intended for turkeys. This is without handle, and open at the top.
2459. (39700). Bird without tail; figures of deer and some other animal, also trees.
2460. (39703). Duck-shaped, without tail; rude figures of animals and birds.
2461. (39511). Fig. 630.
2462. (39704). Bird-shape, no tail; outline figures of Indians.
- 2463-2465. 2463, (39706); 2464, (39712); 2465, (39721), Fig. 632. Usual bird form as shown, and with similar animal figures.
2466. (39705). Resembles specimen shown in Fig. 629.
- 2467-2468. 2467, (39707), and 2468, (39708). Same form; decorations in outline, former of plants, latter of animals; rude.
2469. (39709). Same form; figure of an Indian chasing a deer.
- 2470-2471. 2470, (39710), and 2471, (39717). Fig. 631. Decorated with figures of fish.
2472. (39711). Usual form; oblique; double serrate band and figures of fish.
2473. (39714). Fig. 634.
2474. (39718). Fig. 633.

- 2475. (39719). Fig. 635.
- 2476. (39722). Fig. 636. This belongs to the globular group above described.
- 2477. (39723). Similar to the preceding and belongs to the same group; with figures of sheep and fish.
- 2478. (39724). Fig. 637.
- 2479. (39726). Fig. 638. A true canteen.
- 2480. (39728).
- 2481. (39729). Fig. 639.
- 2482. (39508). Bird with tail more elongate in form than usual. Oblique checkered band on the side.
- 2483. (39514). Similar to water jars in the form of birds, and without handles.
- 2484. (39562). Fig. 640.
- 2485. (39515). Rosette of leaves on the back; tail well formed, probably represents the dove.
- 2486. (39516). No head, merely a spout; decorations simple.
- 2487. (39517). Evidently intended for a hen.
- 2488. (39518). Fig. 642.
- 2489. (39584). Simulates a hen; feathers on the back, deer on the sides.
- 2490. (39585). With handle, wings rudely figured. Shown in Fig. 641.
- 2491. (39586). Similar in form to No. 2480; wings represented by figure, behind them the figures of a bird, evidently a duck, resembling the head of the vessel. Of the usual tea-pot shape.
- 2492. (39583). Without handle, canteen-shaped; open on top, with head apparently of turtle on one side: decorations, bird and rosette.
- 2493. (39580). Fig. 643. Simple jar.
- 2494. (39576). Fig. 644. Figure of a priest.
- 2495-2496. 2495, (39777), and 2496, (39778). Simple water jars of black ware, pitcher-shaped, with slight projection on the body for handle. These were evidently obtained from some other tribe.

EATING BOWLS.

There is but one specimen of Cochiti manufacture in the collection.

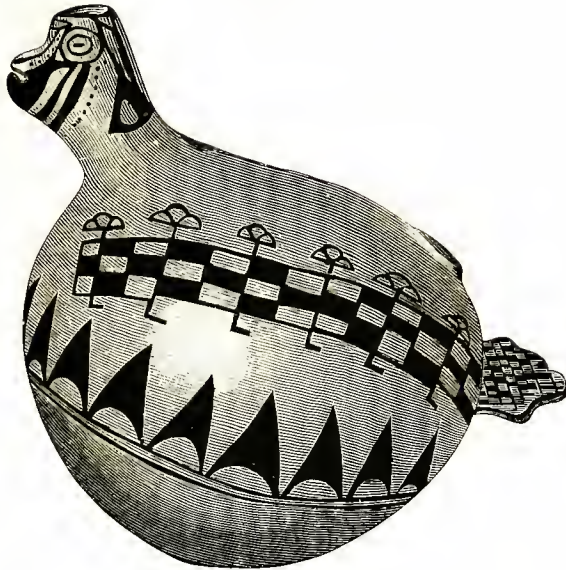
- 2497. (39512). Of ordinary shape; white ware, decorated with black on the inside only; a central ring with radiating corn-leaf figures.

ORNAMENTS, EFFIGIES, AND TOYS.

All small. White ware, slightly decorated unless otherwise specified.

- 2498. (39520). Head of some animal too rude to identify.
- 2499. (39521). Double-headed bird figure on a pedestal.
- 2500. (39526). Black ware. Sitting animal; very rude.
- 2501. (39527). Black ware. Probably jack-rabbit; handle at the back.

FIG. 635



39719
($\frac{1}{3}$)

FIG. 636



39722
($\frac{1}{3}$)

FIGS. 635, 636.—Cochiti Water Vessels.

FIG. 637



39724
($\frac{1}{3}$)

FIG. 638



39726
($\frac{1}{3}$)

FIGS. 637, 638.—Cochiti Water Vessels.

FIG. 639



39729
($\frac{1}{3}$)

FIG. 640



39562
($\frac{2}{3}$)

FIGS. 639-640.—Cochiti Water Vessels.

FIG. 641



39585
($\frac{1}{3}$)

FIG. 642



39518
($\frac{1}{4}$)

FIGS. 641, 642.—Cochiti Water Vessels.

FIG. 643



30580
 $\frac{1}{3}$

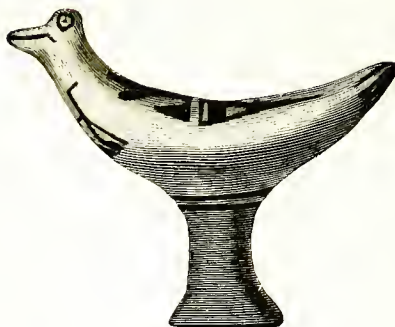
FIG. 644



39576
 $\frac{1}{3}$

FIGS. 643, 644.—Cochiti Water Vessels.

FIG. 645



39857
($\frac{1}{2}$)

FIG. 646



39825
(3)

FIG. 647



39824
($\frac{1}{2}$)

FIGS. 645-647.—Cochiti Effigies.

2502. (39528). Black ware. Young birds. The three last mentioned are most likely from some other pueblo.
2503. (39824). Fig. 647. Black ware.
2504. (39825). Fig. 646. Black ware.
- 2505-2506. 2505, (39826), and 2506, (39827). Similar grotesque figures of black ware.
2507. (39854). Double-headed figure of a bird on pedestal.
2508. (39855). Bird on pedestal; ruffled back.
- 2509-2518. 2509, (39856); 2510, (39857), Fig. 645; 2511, (39858); 2512, (39859); 2513, (39860); 2514, (39861); 2515, (39769); 2516, (39775); 2517, (39883); 2518, (39862), are figures of birds on pedestals, except No. 2514, which is the figure of a little duck, and probably is a toy water vessel.
2519. (39524). A toy cup or basket in the shape of an olla, with handle, the figure of the little water insect or worm appears on this, the only instance in the Cochiti pottery.

COLLECTION FROM SANTO DOMINGO.

ARTICLES OF CLAY.

WATER VESSELS.

There are but nine pieces of this pottery, and all but two of these are small images or drinking vessels in the form of birds.

2520. (39510). A double globe jar or canteen. White ground, with ornamentations in black, as seen in Fig. 649. Depression in the center is probably designed to receive a band or cord to carry it with.
2521. (39513). Large black bowl; no ornamentation.
- Images of black ware; two pieces; a bird on pedestal and a quadruped.
- 2522-2523. 2522, (39652 *a*); 2523, (39652 *b*).
- 2524-2525. 2524, (39653), and 2525, (39654). Human images, very rude.
2526. (39658). Bird on pedestal.

Small drinking vessels in the form of birds. White ornamented ware.

2527. (39655). With four rows of dots on the side; no tail.
2528. (39656). With handle; tail and neck ornamented.
2529. (39657). No ornamentation except a line or two and some dots on the head. Fig. 648.

COLLECTIONS FROM TESUKE.

ARTICLES OF STONE.

METATES, MORTARS, ETC.

2530. (39809). Stone metate for grinding grain, brown sandstone.
 2531. (39810). Quartzitic stone mortar for grinding mineral pigment.
 2532. (39811). Quite small mineral pigment mortar of quartz rock.
 2533. (39821). Gaming ball of fine-grained sandstone.
 2534. (42215). Discoidal quartz pounder.
 2535. (42341). Fig. 650. Paint mortar. This mortar was made from a somewhat rounded sandstone boulder by grinding out a cavity. In the cut, which was drawn for another purpose, the pestle is represented with a small cup-shaped cavity on one side of it, in which the fluid pigment from the mortar was poured and used with the brush of the artist for decorative purposes. This is the only specimen of the kind in the collection, and the only one found where the pestle combines the cup with it.



42341

1
3

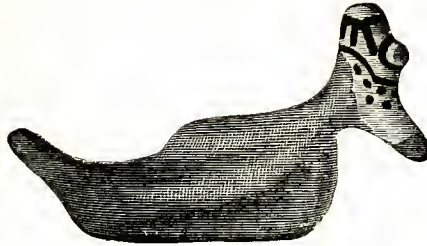
FIG. 650.

ARTICLES OF CLAY.

WATER VASES.

This group, though comparatively small, contains some of the largest and grandest pieces in the entire collection, some of the vases being twenty inches in height and twenty-two in diameter, having a capacity of ten gallons. It consists of white ware with decorations in black, bearing a strong resemblance to that of Cochiti, brown micaceous, and polished brown ware without ornamentation, and black ware without ornamentation.

FIG. 648



39657
(2)

FIG. 649



39510
1
3

FIGS. 648-649.—Santo Domingo Canteen and Effigy.

Tinajas or vases. Well formed and similar in shape to those from Cochiti.

2536. (39507). With oblique diamond figures on the neck, and geometrical figures on the body.
2537. (39520). Upper half only decorated with rude figures of leaves and twigs.
2538. (39523). Similar to the preceding.
2539. (39525). Without neck; a broad and true meander band around the middle, with three-leaved flower above and below on each coil.
2540. (39530). Neck ornamented with a straight and an undulate line; body as in No. 2539.
2541. (39531). With rosette and triangular figures somewhat similar to those on Zuñi ollas.
2542. (39532). Decorations similar to those on Cochiti olla, No. 2421.
2543. (39801). Covered; a beautiful specimen, probably the most chaste and artistic of the entire collection.
2544. (39533). Fig. 651. Similar to the preceding.
2545. (39534). Serrate band around the neck; body with broad band and large circular spaces, each having four dark indentations.
2546. (39542). Neck with straight and undulate lines and short sigmoid figures; body with figures of a plant.
2547. (39549). Neck similar to the preceding; body with a zigzag line dotted along the upper side, and small ovoid spots above and below it, one in each indentation.
2548. (39635). Plain black, polished, large.
2549. (39639). Like the last.
2550. (39660). Large size; dotted line around the neck; heavy band around the shoulder, with sharp and long serrations pointing downward; body with alternate ornamental ovals and four-pointed stars.
2551. (39661). Straight and undulate lines around the neck; body divided into spaces by broad, double-scalloped, perpendicular stripes, having the middle white with an undulate line in the white portion; the intermediate spaces have a sun-shaped figure in the upper corner, from which a double serrate stripe descends obliquely.
2552. (39664). Birds and undulate line on the neck; a straight line with ring dots on the shoulder, broad meander band, with triple leaf ornament around the body.
2553. (39665). Neck with meander as in the preceding; a slender vine, well made, around the body.
2554. (39682). Rather slender; undulate margin; vine around the neck; body with broad band of three-leaved flowers.
2555. (39683). Neck with straight and undulate lines; body with undulate line terraced above as heretofore described, but above this is a row or band of small distinct ovals.

2556. (39685.) Black, without ornamentation.
2557. (39686.) Large bowl-shaped olla, without neck, decorated with vine, cross, scrolls, &c.
2558. (39687.)
2559. (39740.) Upper half with marginal scalloped band, from which hang, obliquely, leaves with bent spines on their margin; below this a serrate and then a double straight line.
2560. (39741.) Squatted in shape. Vine with leaves around the middle of the body.
2561. (39772.) Small; slender vine around the neck, dotted line around the shoulder, and three-leafed vine around the body.
2562. (39773.) With flaring rim; scalloped band around the margin; regular zigzag line around the shoulder, from each lower point of which descend plants.
2563. (39789.) Same decorations as No. 2539, but of the regular form.
2564. (39800.) Small scalloped lines around the body.
2565. (39802.) Brown, without ornamentation.
2566. (39803.)
2567. (39805.)
2568. (39806.) Fig. 652.
2569. (39813.) Fig. 654.
2570. (39814.)
2571. (39815.) Neck colored, with a white zigzag line running through it; body with curious, large leaf-like ornaments of an angular shape.
2572. (39817.) With similar leaf-like figures, but narrower and differently arranged. Shown in Fig. 653. The piece is injured, and the cords seen in the figure were tied about it by the natives to keep it from going to pieces.
2573. (39816.) With a large zigzag band around the upper half of the body, terraced above and below.
2574. (39818.) Very large and beautiful specimen, decorated on the body somewhat like some of the Zuñi pottery. The large circular scrolls are formed of a vine with leaves on the outer side. There are but few of the triangular figures seen in the Zuñi piece; there is a regular and true serrate marginal band; below this on the neck a broad band with diamond spaces.
2575. (39819.) With a broad band around the neck composed of squares placed obliquely, with an oblong white space in each; body with a simple, narrow, straight band or double line.
2576. (39822.) Large scalloped band around the neck, a little leaf pendant from each point; the body with alternate large stars and ornamental diamonds.
2577. (39823.) This has the rim slightly flaring, a scalloped band and leaves around the neck; the body profusely decorated with geometrical figures. This belt is divided into four spaces, in each of

FIG. 651



39533
($\frac{1}{4}$)

FIG. 652



39806
($\frac{1}{5}$)

FIGS. 651, 652.—Tsunke Water Vases.

FIG. 653



39817
($\frac{1}{8}$)

• FIG. 654



39813
($\frac{1}{3}$)

FIGS. 653, 654.--Tesuque Water Vases.

which there is a checkered, terraced pyramid pointing downward; the lower part and sides of each space is occupied with triangular and sagittate figures.

2578. (39868). Small; neck with a row of ovals; the shoulder with a true herring-bone band; a vine with spiny leaves around the body.

2579. (39865).

WATER JUGS AND JARS.

2580. (39812). Plain double-bellied water bottle of micaceous ware. See Fig. 655.

2581. (39834).

2582. (41366). Water jug. Fig. 519.

2583. (39790). Jar or urn of white ware, with two handles ornamented with the usual meander.

PITCHERS.

2584. (39745). A regular well-formed pitcher, with proper lip and handle. White ware ornamented with serrate lines, triangles, and circle. The only one from this tribe.

EATING BOWLS.

The Tesuke bowls vary considerably in form, some having the slope straight, others flaring and of the usual form, others biscuit-shaped. No large specimens were obtained.

2585. (39613). Usual bowl-shape, with flaring margin; no external decorations; inner surface with circular scrolls.

2586. (39647). Biscuit-shaped, with broad meander band externally; no decoration internally.

The following are similar in form and decoration:

2587-2590. 2587, (39666); 2588, (39669); 2589, (39788); 2590, (39648).

Outside plain; inner marginal band a slender vine.

The following numbers are plain, of brown micaceous ware, biscuit-shaped, small:

2591-2593. 2591, (39667); 2592, (39668); 2593, (39835).

The following are of the same ware, platter-shaped:

2594-2599. 2594, (39672); 2595, (39678); 2596, (39679); 2597, (39680); 2598, (39681); 2599, (39792).

2600. (39793). Square.

2601. (39797). Regular bowl-shaped, with foot.

2602. (39673). Biscuit-shaped, with band of straight and undulate lines.

2603. (39674). No outer decorations; inside with radiating serrate lines, and leaves.

2604. (39675). No inner decorations; on outside a marginal serrate band, and a band of leaves around the body.

2605. (39676). Biscuit-shaped; vine, with leaves, around the middle.

2606. (39677). No outer ornaments; on inner surface a center leaf-cross, and above this, radiating lines.

- 2607. (39688). Decorated on inner surface only. A central flower and submarginal band of oval leaves.
- 2608. (39742). Biscuit-shaped; zigzag line, with two leaves at each point on the outside.
- 2609. (39743). Plain red, flower-pot shaped.
- 2610. (39744). Flower-pot shaped, with zigzag lines or vines running up and down, a leaf at each point.
- 2611. (39776). Largest bowl of the group.
- 2612. (39787). Regular shape; zigzag band on the outside.
- 2613. (39798). Small, regular shape, with vines on the inside.
- 2614. (39799). Small figures and birds on the inside.

COOKING VESSELS.

These are always plain black ware, and are of several forms.

Pots. Shaped like the Zuñi vessels.

- 2615-2632. 2615, (39601); 2616, (39602); 2617, (39605); 2618, (39606); 2619, (39607); 2620, (39608); 2621, (39611); 2622, (39670); 2623, (39671); 2624, (39689); 2625, (39735); 2626, (39736); 2627, (39737); 2628, (39738); 2629, (39794); 2630, (39795), with handle; 2631, (39828); 2632, (39874).

Bowl-shaped:

- 2633-2635. 2633, (39603); 2634, (39604); 2635, (39615), with handle. See Fig. 657.

Platter-shaped:

- 2636-2646. 2636, (39609); 2637, (39610); 2638, (39612); 2639, (39614); 2640, (39690); 2641, (39691); 2642, (39692); 2643, (39693); 2644, (39694); 2645, (39695), shown in Fig. 659; 2646, (39739).

TOYS.

- 2647, (39791). Ornamented bird on pedestal.

Blackbirds on pedestals:

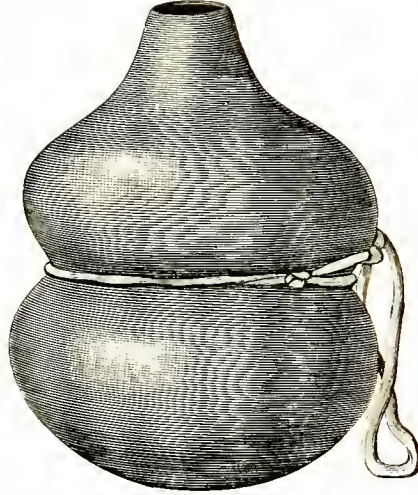
- 2648-2657. 2648, (39804); 2649, (39807); 2650, (39808); 2651, (39820); 2652, (39829); 2653, (39830); 2654, (39831), Fig. 656; 2655, (39832), Fig. 658; 2656, (39833); 2657, (39836).

VEGETAL SUBSTANCES.

MEDICINES.

- 2658. (39751). *O-sha*. Root used as medicine for rheumatism, internally and externally.
- 2659. (39752). *Zerba-lobo*. Wolf root, for pulmonary complaints.
- 2660. (39753). *O-cha*. Root used for rheumatism.
- 2661. (39754). *Ka-cha-na*. Root, semi-medicinal and magio. To prevent breach or wounds, and for sore eyes; external use.

FIG. 655



39812
 $\frac{1}{3}$

FIG. 656



39831f
 $(\frac{1}{2})$

FIG. 657



39615
 $(\frac{1}{2})$

FIG. 658



39832
 $(\frac{1}{2})$

FIG. 659



39695
 $(\frac{1}{2})$

FIGS. 655-659.—Tosuke Vessels.

COLLECTIONS FROM SANTA CLARA.

ARTICLES OF CLAY.

WATER VASES.

This is all black and frequently polished ware without ornamentation. The method of producing the black polish is explained in another part of the catalogue.

Bowls and ollas. Black, without ornamentation. Some of these are of comparatively large size.

2662-2670. 2662, (39645); 2663, (39748), Fig. 662; 2664, (39749); 2665, (39750); 2666, (39779); 2667, (39780), Fig. 660; 2668, (39781); 2669, (39782); 2670, (39786). A very pretty covered jar; cover with a handle. Fig. 672.

2671. (39838). Small with scalloped margin.

2672. (39866).

2673 (39629). Fig. 661. Vase with depressed band around the center; rim forming a band; base small.

2674. (39834). Double lobed bottle or canteen. See Fig. 671.

EATING BOWLS.

These are of black polished ware without decoration of any kind, and of various forms, globular, bowl-shaped, and platter-shaped or true platters.

Globular and small:

2675-2676. 2675, (39556), and 2676, (39616).

Bowl-shaped:

2677-2678. 2677, (39617), and 2678, (39618). With flared and notched rim.

2679-2680. 2679, (39619), Fig. 667, and 2680, (39620). These two with flared and scalloped rim.

2681. (39621). A cooking vessel.

2682-2689. 2682, (39628), Fig. 669; 2683, (39632), Fig. 663; 2684, (39646), Fig. 664; 2685, (39633); 2686, (39636); 2687, (39637); 2688, (39638); 2689, (39643).

Platter-shaped:

2690-2691. 2690, (39630), and 2691, (39640). Scalloped rim.

2692-2698. 2692, (39641); 2693, (39642); 2694, (39646), see Fig. 664; 2695, (39649), scalloped rim; 2696, (39784); 2697, (39785); 2698, (39796).

2699. (39793). Fig. 668. Small platter-shaped dish of black polished ware.

COOKING VESSELS.

2700. (39794). Small pot, no handle.
 2701. (39795). Small pot with handle.
 2702-2705. 2702, (39623); 2703, (39626), Fig. 670; 2704, (39627); 2705, (39629). Small pots without handles, with a constriction or indentation around the middle.
 2706-2707. 2706, (39837), and 2707, (39840). Small pitchers with handles and lips.
 2708. (39839). Canteen with spout and mouth above.

EFFIGIES.

Bird figures, polished, on pedestals. All similar to those shown in the figures.

- 2709-2720. 2709, (39841); 2710, (39842); 2711, (39843); 2712, (39844); 2713, (39845); 2714, (39846); 2715, (39847); 2716, (39848), Fig. 666; 2717, (39849), Fig. 665; 2718, (39850); 2719, (39554); 2720, (39555). The last two are hollow, with an orifice in the back; no pedestal.
 2721. (39553). Canteen in shape of a bird; no pedestal.

COLLECTIONS FROM SAN JUAN.

ARTICLES OF CLAY.

EATING BOWLS.

- 2722-2723. 2722, (39587) and 2723, (39588). These two with handles on each sides. Sides straight.
 2724-2725. 2724, (39589), and 2725, (39590). Biscuit-shaped, as shown in Fig. 675.
 2726. (39591). Platter-shaped, with scalloped margin.
 2727. (39592). Red ware, of medium size, with outer broad marginal band of triangular figures.

Pots. Plain black:

- 2728-2731. 2728, (39593); 2729, (39594); 2730, (39747); 2731, (39625). Canteen-shaped, with handles or ears at or near the top; small circular orifice. See Fig. 673.
 2732. (39650). A similar vessel of black ware, with larger orifice, the margin of which is scalloped. Large ears or handles near the top on each side. Bottom oval, and an impressed band around middle of body. In some of the canteen-shaped vessels this depression is for holding the cord with which the vessel is transported. See Fig. 674.



FIG. 660

39780
($\frac{2}{3}$)



FIG. 663

39632
($\frac{1}{2}$)

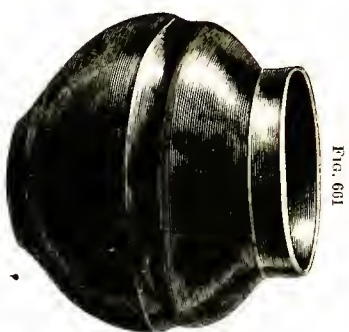


FIG. 661

39629
($\frac{2}{3}$)



FIG. 664

39646
($\frac{1}{3}$)

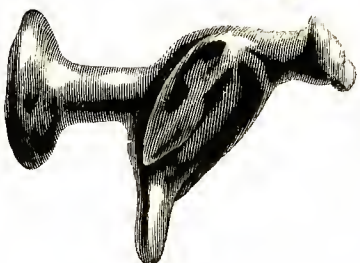


FIG. 665

39849
($\frac{1}{2}$)



FIG. 662

39748
($\frac{1}{3}$)



FIG. 666

39848
($\frac{1}{2}$)

FIGS. 660-666.—Santa Clara Pottery.



FIG. 667 (39619)
 $\frac{1}{3}$



FIG. 668 (39793)
 $\frac{1}{4}$



FIG. 669 (39628)
 $\frac{1}{4}$



FIG. 670 (39626)
 $\frac{1}{4}$



FIG. 671 (39834)
 $\frac{1}{4}$



FIG. 672 (39786)
 $\frac{1}{4}$

Figs. 667 - 672. SANTA CLARA POTTERY.

FIG. 673



39625
(2)

FIG. 674



39650
(3)

FIG. 675



39590
 $\frac{1}{3}$

FIGS. 673-675.—San Juan Pottery.

2733. (39659). A jug-shaped pitcher of decorated red ware, with regular handle neatly formed. Ornamented with a looped vine and twigs, with leaves well drawn; neck slender and orifice with lip, but less in proportion than in ordinary pitcher.



39926
 $\frac{1}{3}$
 Fig. 676.

COLLECTION FROM JEMEZ.

ARTICLES OF CLAY.

2734. (39926). Fig. 676. A very singular and pretty water vessel, obtained at the Jemez pueblo. White ware decorated in black and brown. It is probable that the peculiar form is given from mere fancy, and not for the purpose of adapting it to any particular use, as it appears to be simply a water vessel.

COLLECTION FROM THE JICARILLA APACHES.

ARTICLES OF CLAY.

This is a light brown micaceous ware, and the pieces are all small, or comparatively so. They consist of pots, pitchers, and cups.

This small collection, though not obtained directly from the Jicarilla Apaches, is attributed to them, for the reason that wherever found among other tribes it is by them accredited to the Apaches. It is manufactured, however, by some of the Pueblos along the Rio Grande, and occasionally by the more western Pueblos. The party did not visit the Apaches mentioned, and are not positively certain that they manufacture pottery. These facts are mentioned in this connection to show that there is some question as to the origin of this small collection.

Vase-shaped pots:

2735-2741. 2735, (39535); 2736, (39536); 2737, (39537); 2738, (39538); 2739, (39539); 2740, (39540); 2741, (39544). This and the next two have the rims scalloped.

2742-2744. 2742, (39545); 2743, (39546); 2744, (39547).

Pot-shaped:

2745-2751. 2745, (39595); 2746, (39596); 2747, (39597); 2748, (39598); 2749, (39599); 2750, (39600); 2751, (39851).

418 COLLECTIONS OF 1879—JICARILLA APACHE—OLD PECOS.

Pitchers and cups, with handles of regular form :

2752. (39543). Finger impressions around the middle.

2753-2754. 2753, (39540), and 2754, (39548). Scollaped margin.

2755. (39770). With an undulate impressed line around the middle.

Miscellaneous :

2756. (39852). Incense-burner, somewhat in the shape of a beaver hat, with a rim in the form of a bird; a small orifice in the middle.

2757. (39853). Bird image.

COLLECTIONS FROM OLD PECOS.

ARTICLES OF STONE.

2758. (39756). Flint scraper. Rudely shaped, of hard cherty rock, flat on the inner face, convex on the back.

2759. (39757). An irregular square flat piece of sand-stone, on one side of which is a small circular cup-shaped depression:

2760. (39758 *a*). A small mortar composed of fine-grained sand-stone, half broken away; being of quite soft stone, it was probably used for pulverizing food of some kind.

2761. (39758 *b*). Quartz mortar made from a round water-worn boulder. The cavity is symmetrical; diameter five inches.

2762. (39759). Half of a cherty water-worn boulder from which flakes for flints have been chipped.

2763. (39760). Small round cherty boulders, frequently used in chipping for flints, but in this instance they seem to have been used as hammers.

2764. (39761). Hammer made from a section of a broken rubbing or grinding stone of calcareous rock.

2765. (39762). Maul from broken rubbing stone or grinder, grooved at each end; rhyolite.

2766. (39763). Rudely shaped sinker (or what is called a sinker), rounded at each end and grooved in center; schistose rock.

2767. (39764). Rudely shaped chisel or celt of metamorphic schist.

2768. (39759). Rough chipping stone; agate.

2769. (39760). Three irregular round balls of flint-stone, flaked by hammering.

ARTICLES OF CLAY.

2770. (41771). Fragments of pottery from the old and new court, exhibiting Spanish glaze.

2771. (41772). Pottery fragments, decorated in colors. Old and new court.

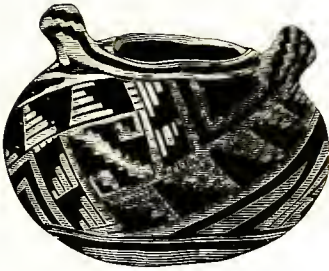
2772. (41773). Ancient fragments, glazed.

FIG. 677



40811
($\frac{1}{3}$)

FIG. 678



40813
($\frac{1}{3}$)

FIG. 679



40815.
($\frac{1}{4}$)

FIG. 680



40816
($\frac{1}{4}$)

FIGS. 677-680.—Water Vessels from Cañon de Chelly.

- 2773. (41774). Fragments of pottery from the old court, showing glaze with white ground.
- 2774. (41775). Miscellaneous fragments of pottery from various parts of the ruins.
- 2775. (41794). Fragments of pottery, showing white coating, from new court.
- 2776. (41796). Pottery fragments, showing Spanish glaze inside; new court.
- 2777. (41797). Fragments with edges chipped.
- 2778. (41798). Rim pieces of black pottery were from the old court.
- 2779. (41799). Fragments of red pottery from new court.
- 2780. (41800). Fragments of plain pottery from both old and new courts.
- 2781. (42344). Specimens of adobe mortar from the walls of the Pecos ruins.
- 2782. (42345). Specimen of same.
- 2783. (42373). Chimney pots from Casa Blanca, Old Pecos.
- 2784. (42374). Very large cooking pot in fragments from Casa Blanca, Old Pecos.

ARTICLES OF WOOD.

- 2785. (41276). Beam of wood from the old court.

COLLECTIONS FROM THE CAÑON DE CHELLY.

ARTICLES OF CLAY.

WATER VESSELS.

- 2786-2789. 2786, (40813), Fig. 678; 2787, (40814), Fig. 677; 2788, (40815), Fig. 679; 2789, (40816), Fig. 680. These pieces are white ware, decorated with black. The colors in great part still remain, showing that they are comparatively modern. The lines represent colors and not indentations.
- 2790. (40796). Fig. 681. Upper part broken; supposed to have been a pitcher, as part of the handle remains. From Cliff House ruins, Cañon de Chelly. Red ware. Comparatively modern.
The following articles are ancient ware, from the same place as the preceding:
- 2791. (40600). Small vase of white ware, probably comparatively modern. The design, though simple, is somewhat peculiar and different from what is usually found on pottery of the present day. See Fig. 683.
- 2792. (42202). Fig. 682. Similar in form, size, and color to the preceding; the design, as will be seen by reference to the figure, is a common one.
- 2793. (40812). Pitcher. White ware, with black decorations. See Fig. 690.

420 COLLECTIONS OF 1879—CAÑON DE CHELLY—PICTOGRAPH ROCKS.

- 2794-2795. 2794, (40819), Fig. 691, and 2795, (40820), Fig. 688. Pitchers, white; ware figured.
2796. (40824). Very small pitcher with handle; of uncolored ware.
2797. (42203). A very pretty pitcher of white ware, with decorations in black, much faded, showing age, although so well and truly formed it is evidently not modern. Fig. 692.
2798. (40601). A round-bottomed pitcher-shaped vessel, white ware with black lines; the colors are much faded, showing age. Fig. 689. The design is evidently of a previous age, and we will be justified, perhaps, in saying that it belongs to the period of transition from the rigid lines and angles to the curves.
2799. (40811). Fig. 687. Small pitcher, *e-musch-ton-tsān-nā*, originally of white ware; bowl uncolored.

BOWLS.

2800. (40823). Small bowl, with handle each side, white, with black colors. Fig. 684.
2801. (40825). A small paint-pot shown in Fig. 685.
2802. (40857). Fig. 686. A small pot, apparently blackened by fire, unadorned except with the spine-like projections around the lower half; probably used for a paint-pot.

COOKING VESSELS.

- 2803-2806. 2803, (40817), Fig. 693; 2804, (40818), Fig. 696; 2805, (40821), Fig. 695; 2806, (40822), Fig. 694. These are the old corrugated ware, but with the exception of the third they do not show the action of fire, but were probably used for cooking vessels.



39873

(4)

FIG. 697.

COLLECTIONS FROM PICTOGRAPH ROCKS.

ARTICLES OF CLAY.

2807. (39873). Fig. 697. A corrugated pot 11 inches high and 10 inches in diameter at the widest point. Evidently coil-made; the different coils slightly overlap each other tile-fashion. On the inside it is smooth and does not show the coils. It has been blackened by the fire, the original color having been a dark slate, the natural color of the clay. It was

evidently but slightly burned at first; very ancient.



FIG. 681

40796
(4)

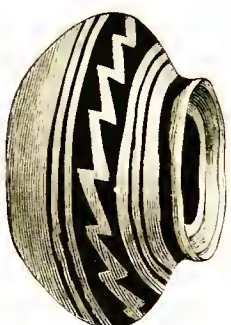


FIG. 682

42202
(1)

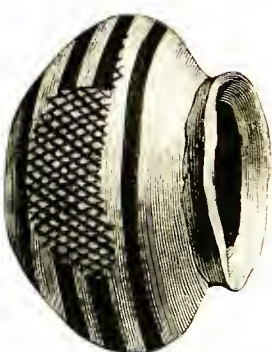


FIG. 683

40600
(2)



FIG. 684

40823
(2)

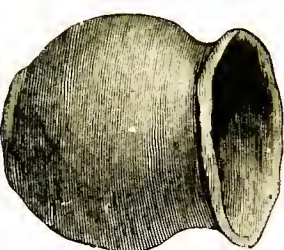


FIG. 685

40825
(2)



FIG. 686

40857
(2)

FIGS. 681-686.—Ancient Pottery from Canon de Chelly.

FIG. 687



40811.
($\frac{2}{3}$)

FIG. 688



40820.
($\frac{1}{2}$)

FIG. 689



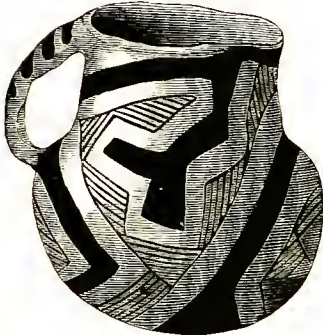
40601
($\frac{1}{2}$)

FIG. 690



40812.
($\frac{1}{4}$)

FIG. 691



40819.
($\frac{3}{3}$)

FIG. 692



42203.
($\frac{1}{3}$)

FIGS. 687-692.—Ancient Pottery from Cañon de Chelly.

FIG. 693



40817.

(1/4)

FIG. 694



40822

(1/3)

FIG. 695



40821

(4)

FIG. 697



40818

(3)

FIGS 693-696.—Cooking Vessels from Cañon de Chelly.

COLLECTIONS FROM OTHER LOCALITIES.

ARTICLES OF CLAY.

MISCELLANEOUS.

2808. (39529). Black, polished olla, rather large; from Ponake Pueblo.
2809. (39551). Unadorned moccasin from Pueblo of New Mexico.
2810. (41770). Fragments of pottery, ornamented, colored, and plain, from ruins near Pueblo of Nutria.
2811. (41776). Fragments of plain pottery from Agricultural Camp, six miles east of San Antonio Springs.
The following specimens are from the same locality :
2812-2818. 2812, (41777), painted; 2813, (41778), corrugated; 2814, (41779), ribbed; 2815, (41780), bird's head painted on it; 2816, (41781), painted; 2817, (41782), corrugated; 2818, (41783), ribbed.
2819. (41784). Fragments of pottery from Old Zuñi Mesa, three miles southeast of Zuñi.
2820-2822. 2820, (41785); 2821, (41786); 2822, (41787), are fragments of the corrugated, ribbed, indented, and decorated ware, from the Zuñi Mesa.
2823-2825. 2823, (41791); 2824, (41792); 2825, (41793), are also fragments of pottery from the Zuñi Mesa.
2826. (41795). Fragments of pottery from top of Zuñi Church.
2827-2829. 2827, (41788); 2828, (41789); 2829, (41790). Fragments of ancient pottery from the environs of Wolpi. The specimens are of the corrugated and laminated forms and are decorated in color.
2830. (41981). Notched stick, with bone, used as musical instrument. See description of similar objects from Wolpi.
2831. (42224). Small wooden ladle; locality not known.
2832. (42049). Fragment of pottery with the edges ground off, probably a pottery trowel, from Pictograph Rocks, about sixty miles east of Fort Wingate, N. Mex.
2833. (42252). Fragment of pottery from Wolpi may be a charm, but likely a pottery smoother or trowel.
2834. (42348). Chips of jasper and fragments of pottery from mound in Missouri, opposite St. Louis.
2835. (42368). Handle of pottery ladle from Wolpi.
2836. (42370). Portion of large yellow corrugated vessel from near Wolpi.

STATUETTES.

The following numbers are specimens of statuettes, of micaceous clay, representing human beings in various attitudes, both male and female.

They are attributed to the Cochiti Pueblos, but as they were obtained in Santa Fé from traders, the correctness of their origin may be doubted. They were made, however, by some of the Rio Grande Pueblos not very remote from Santa Fé:

2837-2858. 2837, (42001); 2838, (42002); 2839, (42003); 2840, (42004);
2841, (42005); 2842, (42006); 2843, (42007); 2844, (42008); 2845,
(42009); 2846, (42010); 2847, (42011); 2848, (42012); 2849, (42013);
2850, (42014); 2851, (42015); 2852, (42016); 2853, (42017); 2854,
(42018); 2855, (42019); 2856, (42020); 2857, (42021); 2858, (42022).

